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INTERSTATE MEDICAL JOURNAL.

VOL. IX.

JANUARY, 1902.

NO. I.

ORIGINAL ARTICLES.

TECHNIQUE OF X-RAY THERAPY.

BY DR. ROBERT KIENBOECK, of Vienna, Austria.

(ILLUSTRATED.)

The technique of the X-ray therapeutics for skin diseases has been elaborated by Schiff and Freund, Gassmann and Schenkel, Hahn, Albers-Schoenberg and Straeter. Further contributions on this subject have been made by the writer in the *Wiener Klin. Wochenschrift*, 1900, No. 50, and in the *Wiener Med. Presse*, 1901, No. 19. A full bibliography will be found attached to these articles.

I. FUNDAMENTAL PRINCIPLES OF RADIOTHERAPY.

Radiotherapy depends upon the fact that the skin undergoes a peculiar transformation under the influence of rays from the Roentgen light. In other words, a so-called "Roentgen dermatitis" is set up. The fundamental principles of the technique embrace the following:

1. The active agent is embodied in the X-rays which come off from an X-ray tube or Roentgen tube.
2. All kinds of X-rays do not act alike; rays of a moderate penetrating power (*i. e.*, which penetrate soft parts in a moderate degree) act more powerfully than those of greater penetrating power.
3. The degree of change which can be brought about in the skin depends upon the intensity of the radiance.
4. This effect is seen on the skin after a latent period of some weeks' duration.

The technique of X-ray therapy depends upon these fundamental principles, and is besides a matter of practical possibility, because the intensity of the radiance as well as the expected effect may be exactly regulated at will.

Before discussing the subject further, it might be well to qualify the four fundamental principles with some explanatory remarks.

I. The active agency of the functioning Roentgen tube is the X-ray and no other forces which come off from the Roentgen tube (*e. g.*, kathodal rays do not penetrate the wall of the tube, at the same time electrical waves of known vibration have no effect upon the skin). Further, the exposure of the skin to the action of static electricity and electric sparks is, as far as these peculiar changes are concerned, without any significance.

Because the X-rays proceed principally from the focus of the tube, and go in straight lines in all directions (within a space that is bounded by the plane of the

anti-kathode mirror upon its negative side), the focal rays are the principal with which we have to concern ourselves. The rays from the glass walls of the tube and from the positive pole of the anti-kathode can, for all practical purposes, be disregarded on account of their slight intensity.

On the skin of the forearm the inflammation begins (shown in Fig. 1 by the punctated drawing) after several weeks only on the parts not protected with lead, and only on that half of the same with which the more intense rays come in contact. The boundaries of the area of exposure to the rays are not exceeded by the inflammatory zone. The inflammatory zone is sharply marked off both proximally and distally, yet the inflammation is less severe towards the under side.

That the effect on the skin only takes place by the X-rays falling upon it was proved by interposing between the tube and the skin a lead diaphragm, the opening of which showed enlarged upon the skin.

In general, the more we obstruct the rays the less will be their effect on the

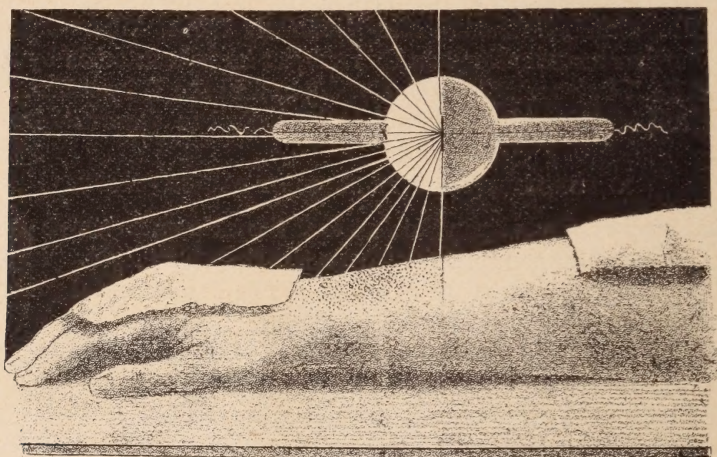


FIG. 1.

skin. A hard rubber plate interposed will cause only slightly decreased effect upon the skin; tin-foil decreases it very much, while a sheet of lead 1 mm. thick prevents it altogether.

II. Roentgen tubes are found in various conditions at different times. They change with use and therefore exhibit different properties at different times. For our purpose we can divide the tubes into five classes showing different characteristics, according to the different degrees of vacuum present. In the following classification, the vacuum becomes less and the amount of air contained increases, as we go down the scale:

1. *Tubes, which are too hard*, because they contain too little air, are not penetrated by the induction-currents of the highest tension which is at our disposal, and therefore give out no Roentgen light but only electrical waves.

2. *The hard tubes* through which a part of the current of high tension can pass, this being changed into Roentgen light of a highly penetrating quality. With it we get on the fluoroscope and the photographic plate a shadow-picture

of the hand which is lacking in contrast. The soft parts and the bones being about equally well penetrated by such rays, very little of the light is absorbed.

3. *The medium-soft tubes or good tubes* possess a moderate amount of air,

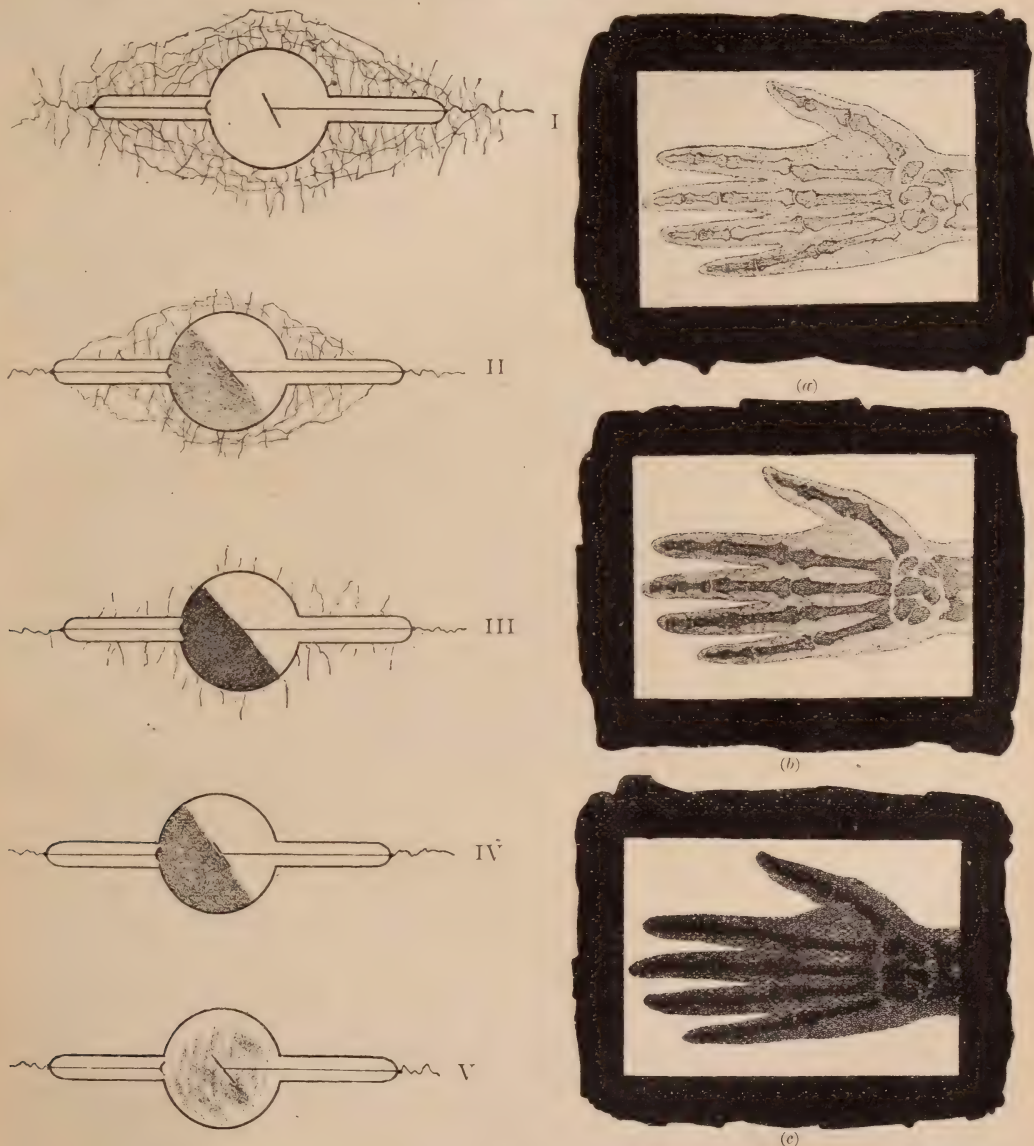


FIG. 2.

NOTE.—Tubes I. and V.—no X-rays produced. Illustration (a) shadow picture of tube II; (b) tube III.; (c) tube IV.

transform almost the entire electrical stream into Roentgen rays, give an intense radiance and one of moderate penetrating power.

These “critical” Roentgen rays cast the sharpest shadows of the different parts of the body. They are therefore better absorbed by the tissues than are the highly penetrating rays from hard tubes, and have consequently a more intense effect upon the tissues, particularly on the skin where they enter; deeper the effect is very slight, because the rays have been already weakened (a change of X-ray energy into chemical energy).

4. *The soft tube* contains only a small amount of air and is a better conductor. These tubes produce, with a current of lower power, a more intense light. No part of the electricity is lost outside the tube; and it can be touched with the finger without getting a spark; its light has only a slight penetrating power; only thin parts of the body, viz., the hand, etc., are penetrated. In the shadow-picture the bones appear black. The greater part of these rays are retained by the skin and reach the deeper parts in a much less effective state. Even a short radiance from such a tube will produce changes in the skin, but to an inconsiderable depth.

5. *The tubes which are too soft* do not transform the current into X-rays; they are for our purposes equally as useless as those which are too hard.

The above sketches illustrate the effects produced by the tubes above referred to. The electrical discharges on the outside of the tube are indicated by wavy lines, and the green fluorescence of the X-rays where it passes through the

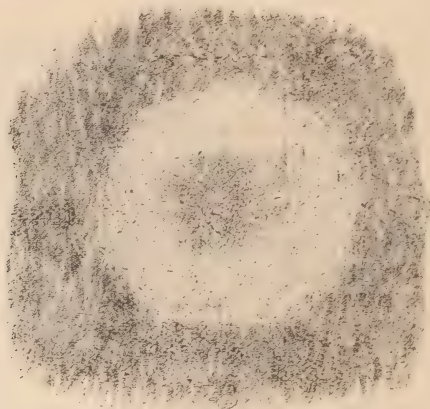


FIG. 3.

wall of the tube by shading. The spots in tube No. 5 indicate the presence of violet Geissler light.

The shadow-pictures produced by the tubes II-IV are depicted alongside of the illustrations of the same.

Since tubes grow softer during the passage of the current, and in the course of time through continuous use become harder, we now make use of those only in which the amount of air can be regulated. When the vacuum in a tube is not what we desire, it is allowed to fill with air until it has become what we call "critical," and is then lighted and used. The fitness for dermatological use is the same as that for diagnostic purposes.

III. The degree of change in the skin depends upon the intensity of the radiance, the vacuum condition of the tubes being the same. The amount of the rays absorbed by the skin determines the grade of the Roentgen dermatitis. The exposure of the skin can be compared with that of the photographic plate.

The total effect of the exposure of a region depends upon the intensity of radiance of a single X-ray wave and upon their number. The intensity of the radiance of a region at the moment a light wave strikes it is proportional to the intensity of the light emitted; furthermore, it is in an inverse ratio to the distance of the region from the focus and to the angle of the rays.

If the tube is near a level skin surface the effect is very irregular. In a disk-shaped area, the focus being just above its center, there occurs in a rabbit violent inflammation of the skin around a ring which is several cm. broad, and which itself shows but a little change (Fig. 3). A vaulted surface, of course, reacts within much narrower boundaries.

The time of exposure is determined by the number of Roentgen rays which strike the skin. A remark concerning the length of exposure is futile unless the number of interruptions of the primary current and the number of those in the induced current and the Roentgen light are given. It is by no means unimportant to realize whether the skin at one exposure receives a certain number of X-ray waves with exceedingly rapid interruptions, or whether the same number are received at several sittings separated from another by one day, or whether the same is received in one sitting prolonged corresponding to the lower number of interruptions. It is to be supposed that pauses allow the tissues to recuperate.

[TO BE CONCLUDED IN FEBRUARY ISSUE.]

PENETRATING WOUNDS OF THE HEART, WITH SUTURING OF THE WOUNDS—REPORT OF A CASE.

By H. L. NIETERT, M. D., of St. Louis, Missouri,

SURGEON IN CHARGE OF THE ST. LOUIS CITY HOSPITAL.

In volume viii., No. 12 (December, 1901), of the INTERSTATE MEDICAL JOURNAL, I reported a collection of twenty-three cases of penetrating wounds of the heart with suturing of the wounds. This number included one of my cases operated upon in April last. I now wish to report my second case, operated upon October 17th; also two additional cases collected from the valuable article of Dr. Tully Vaughn, in *Medical News*, December 7, 1901, and one reported in *Riforma Medica*, September 2, 1901, by Dr. Giovanni Ninni.

The following is a report of my second case:

E. D., age twenty-seven, born in Alabama, entered the hospital October 17, 1901, with a penetrating wound in left chest. Patient was in a semi-conscious condition, and the greater portion of his history was obtained several weeks after admission to the hospital. He stated that he had been steamboating on the steamer "City of Chester," which runs between St. Louis and Chester, Illinois. When the steamer landed at Chester several colored roustabouts began a quarrel with patient, and one of them stabbed him in the sixth interspace, a little to the right of left papillary line. The instrument used was a long-bladed pocket-knife. Patient then walked a distance of about one hundred feet and asked a bystander where he could lie down quickly. At this moment he fainted and fell. The stabbing occurred at 11:00 P. M. on October 16th; he arrived at the hospital at 1:30 P. M. October 17th, fourteen hours after the injury. On entering the hospital patient seemed to be suffering from great shock and marked dyspnea. Temperature, 98°; pulse, 104; respiration 32.

INSPECTION.

Revealed a well-developed negro, weighing one hundred and ninety pounds, about five feet eight inches in height. An incised wound was seen in the sixth interspace, a little to the right of the left papillary line. Wound was three and one-half cm. long.

PERCUSSION.

Superficial area of cardiac dullness extended almost to papillary line; resonance over left upper lobe was clear and pulmonic; in region of nipple there was slight flatness; over left lower lobe, posteriorly, there was absolute flatness; resonance over right lung was pulmonic.

AUSCULTATION.

Vesicular murmur and normal lung sounds could be heard over entire right lung and upper lobe of left lung. Over the lower lobe of the left lung, however, the sounds were remote and indistinct. Over the precordial area could be heard a distinct splashing sound, synchronous with every systole. The heart sounds were not very definite, and at intervals seemed to merge into each other; heart action was very turbulent. From the symptoms a diagnosis of internal hemorrhage was made, probably coming from the heart. In accordance with our routine hospital practice, it was immediately decided to explore the wound and ascertain the source of the hemorrhage. Patient was immediately prepared for operation, and without an anesthetic the wound was slightly enlarged to permit of a digital examination. With the finger passed into the wound, a cut could be readily felt in the pericardium, and a second wound in the left and posterior aspect of the heart. In view of the serious condition of the patient, it was immediately decided to attempt the suturing of the wound in the heart. He was given a few whiffs of chloroform anesthesia and an incision was made along the lower border of the fourth rib, extending for two inches outward from the left border of the sternum. A second incision was made along the lower border of the sixth rib to a point about two inches to the left of the sternum. The outer extremities of the two incisions were united by a third incision. The fifth and sixth ribs were divided in the line of the outer wound, as were also the intercostal muscles and pleura. The entire flap, composed of skin, muscles and ribs, was forcibly pulled toward the right side, partly breaking the cartilages near the sternum. (The flap resembles that first outlined by Rotter, which I described fully in my last article.)

The opening thus made gave an excellent view of the pericardium. The blood could be seen trickling from the pericardial cut, especially on systole. The left lung was constantly obscuring the field and was spattering blood over the operator. With a view of removing some of the blood, patient was rolled on his left side and about one and one-half pints was thus removed. A gauze pad was then placed over the lung to keep it out of the way. The cut in the pericardium, which was about one inch in length, was enlarged until it measured about two inches, and the edges grasped with long, slender forceps. At first no wound could be seen in the heart, but blood could be seen welling up from the back of the organ. The heart and pericardium were then tilted forward and to the right by means of the fingers of an assistant, and the pericardial sac mopped out with gauze. A cut was then seen three-fourths of an inch in length in the wall of the left ventricle. It was located quite far back and ran perpendicular to the long axis of the heart. A constant small stream of blood was seen to flow from the wound. It seemed that the knife had made an extensive advance into the wall of the ventricle, but it was impossible to state with certainty how large was the wound in the endocardium. The wound was not probed, but it appeared certain that the endocardium had been penetrated. An attempt was then made to draw the heart forward with slender forceps, as in my former case, but it was found impracticable. With the middle and index fingers held behind the heart, it could be brought into excellent position. Two interrupted silk sutures were introduced by means of a highly curved gut-needle, which stopped the hemorrhage completely. While introducing the needle the thickness of the wall was borne in mind, as it was intended to avoid, if possible, the endocardium.

No endeavors had been made to prevent infection before patient came to our hands; it was, therefore, presumed that the pleural cavity and pericardium had been infected, and it was decided to drain. A small drainage was, therefore, introduced back of the heart, and the pericardium closed with the exception of about one-half inch. Another drain was placed into the pleural cavity. The osteoplastic flap was now permitted to fall back into position, and sutured, except at the point of exit of drain. An antiseptic dressing was applied and patient placed in bed at 4 P. M.

At 4:45 P. M. patient's temperature was 98°, respiration 32, pulse 104.

EXAMINATION CONTINUED.

Digestive System.—Teeth good, bowels regular, assimilation good.

Nervous System.—Nothing unusual observed.

Genito-Urinary System; Urinalysis.—Single specimen; specific gravity, 1022; color, amber; transparency, clear; odor, normal; reaction, acid; albumin, a trace; sugar not present. Microscopical test, calcium oxalate crystals found, hyaline casts, red and white blood cells, and bladder epithelium.

POST-OPERATIVE COURSE.

Patient was immediately given hypodermoclysis of 500 c.c. of physiological salt solution, strychnine and spirits of frumenti, and the stimulants repeated at regular intervals.

October 18th.—Patient gradually grew restless, and later in the afternoon became delirious. In addition to the stimulants mentioned above, saline enema were given every three hours during the day. Wound was dressed, drains from the pericardium were removed, drains from pleural cavity also removed, and patient was turned on his side to allow escape of about 60 c.c. of sero-sanguineous fluid. A drain was again placed in the pleural cavity, but no drain was reinserted in the pericardial sac.

October 19th.—Patient continued very restless and delirious; evening temperature 102°, pulse 120, respiration 46; wound dressed.

October 20th.—Very restless; morphia administered hypodermically; saline enema four times daily. Evening temperature 101°, pulse 120, respiration 30.

October 21st.—Still restless; temperature 101°, pulse 120, respiration 36.

October 22d.—Temperature 101°, pulse 116, respiration 24.

October 24th.—Drain removed from pleural cavity; patient's back was elevated to a semi-reclining posture with pillows; rested some better. Temperature 98°, pulse 108, respiration 24. A small amount of purulent fluid discharged from the wound, which, on microscopical examination and on culture on glycerine-agar, showed the presence of staphylococcus pyogenes albus.

October 26th.—Temperature 103°, pulse 112, respiration 36.

October 28th.—Patient very restless; wound still continues purulent; temperature 104°, pulse 120, respiration 40. Left pleural cavity had evidently been infected, but no septic pericarditis could be demonstrated.

November 1st.—Small amount of pus still discharged from wound; temperature 100°, pulse 100, respiration 28.

November 3d.—Temperature 101°, pulse 100, respiration 38. Dullness over left lobe slightly increasing. Paracentesis of chest failed to locate pus.

November 10th.—There was a sudden rise of temperature to 102°; patient became very dyspneic, breathing at the rate of 48 per minute; pulse very frequent, counting 140. There was now a complete flatness over lower lobe of left lung and a bulging was found over left nipple. Paracentesis of chest revealed a thick, pale-red liquid, which on smear preparation showed pus-cells, red and white corpuscles. He was hastily prepared for thoracotomy, which was done under cocaine anesthesia. One inch of the left eighth rib was resected in the

post-axillary line and a large amount of purulo-sanguinulent fluid was removed, and a large rubber drainage tube introduced into the wound. Dressing was applied, patient heavily stimulated.

November 11th.—Temperature, pulse and respiration subsiding, patient feels improved.

Temperature, pulse and respiration almost normal until November 26th, when temperature suddenly rose to 102, pulse 104, respiration 32. The conditions were brought to normal again by saline purge and laxative enema.

November 27th.—Temperature 98, pulse 96, respiration 24. Patient feels well. He is now allowed to blow up a pneumatic bed-ring so as to expand his lungs. This exercise was performed twice daily, patient being instructed to use moderate force.

December 1st.—Patient allowed to sit up.

December 2d.—Patient is now instructed to practice a series of calisthenics so as to exercise his chest and muscles of respiration. He also continues to blow up the pneumatic bed-ring twice daily.

December 10th.—Drainage tube removed from wound.

January 4th, the date of this writing, wounds are entirely healed and patient is absolutely well.

Physical examination of the patient shows that all his organs are in a fairly good condition. Apex beat is felt in the fifth intercostal space, about an inch to the right of the papillary line; percussion shows the heart dullness extending over normal area; auscultation shows the heart to act freely and regularly; percussion over the lungs shows the left side very slightly dull; although the vesicular murmur is audible over entire left lung, it is not as loud as on the opposite side.

The following are brief histories of two additional cases collected from the *Medical News* of December 7, 1901:

CASE 1.—Operated on by Bufnoir; instrument entered in left side of sternum in sixth intercostal space, injuring the right ventricle. Patient died.

CASE 2.—Operated on by Fontan; wound was situated on left side in cardiac region between third and seventh ribs; instrument penetrated left ventricle. Patient recovered.

A brief history of the case reported in *Riforma Medica*, September 2, 1901, is as follows:

Operation performed by Giovanni Nimmi; instrument entered on left side of sternum and injured right auricle. Patient died.

The addition of these cases brings the number, collected from various sources, up to twenty-seven. A brief summary of the total number of cases is given below:

Number of cases recovered.....	9
Number of deaths.....	18
External wound located on left side of sternum in.....	25 cases
External wound located on right side of sternum in.....	2 “
Pleura injured in.....	26 “
Pleura uninjured in.....	1 “
Left auricle penetrated in.....	1 “
Right auricle penetrated in.....	1 “
Left ventricle penetrated in.....	17 “
Right ventricle penetrated in.....	7 “
Not reported.....	1 “

CONCLUSIONS DRAWN FROM THE STUDY OF THE ABOVE REPORTED CASES.

Firstly.—The mortality being only sixty-six per cent., speaks strongly in favor of operative interference in this class of wounds.

Secondly.—If pleura is involved in the wound, the Rotter operation described in my former article is the best method of approaching the heart.

Thirdly.—If the pleural cavity is not opened, the heart should be approached by the extra-pleural method, fully described in my former article.

Fourthly.—Infection of the pleura and empyemia readily follows this class of injury. If infected, pleural cavity should receive early drainage at some dependent part.

THE HYGIENE OF TUBERCULOSIS.*

BY GEORGE HOMAN, M. D., of St. Louis, Missouri.

As I understand the subject to be discussed this evening, the share allotted to me would embrace only a consideration of the means and methods by which considerable bodies of people may be guarded against the inroads of tuberculosis in all its forms; but from the nature of things a knowledge of such protective resources can only be acquired by close observation and attentive study of the units composing such populations, for sanitary safety can come only through a thorough understanding of the laws of any certain disease with respect to the conditions of its origin, growth, and spread, and these laws can be comprehended solely by tested facts and characteristic effects observed in individual sufferers, after which a working plan for combating its extension and compassing its destruction may be framed and put into effect.

That there is most urgent need for the waging of active intelligent warfare against tuberculosis goes without saying. Reflect for a moment on the mortal toll which this prince of the powers of death, this greatest of pestilences, levies on the human race! Of all the deaths in civil life officially recorded throughout the world it regularly claims not less than one-tenth as its own. There is very high authority for the statement that one-third of all deaths between the ages of fifteen and sixty years are due to this one disease, while twenty-five per cent. of all bodies examined, dead from other causes, show evidences of the inroads of tubercle bacilli. It has destroyed with a uniformity so consistent and a sway so unrelenting for so many ages, that human energy seems to have been daunted when thus confronted, and efforts looking to its overthrow have lacked concert, and have not been productive of any wide or lasting results.

Let us consider briefly what the effect on the outside world would be (as well as on the morale of our own population) if one hundred and fifty persons died here every month of bubonic plague, Asiatic cholera or yellow fever—foreign pestilences that mercifully kill their victims in a few days rather than extend their sufferings over years! Would not local business be palsied, social ties be broken, the obligations of a common humanity often renounced, and would there not be an exodus of panic-stricken people fleeing whither they might, and this city be under ban of non-intercourse by other communities acting under the spur of frightened apprehensions of coming evil? That such would be the case cannot be doubted by any one who knows by experience, or has read the story of pesti-

* Read before Alumni Association of the Medical Department Washington University.

lential outbreaks—the many would flee but some would stand their ground, and at the head of these, as ever, would be found members of the medical profession. And it has been through the teachings of such dire experiences that all that is known of successful methods of resistance to epidemic disease has been gained, and which has placed public sanitation in the rank of a special branch of science.

In the case of tuberculosis a chronic condition of population infection obtains in every country that claims civilization, and the rule of this destroyer has been submitted to with but little organized resistance until quite recent years, when the nature of the disease and the manner of its propagation became known through bacteriologic study.

An examination of the mortality records for 1900, and those for last October, both show that the constant annual death-rate in St. Louis from all forms of tuberculosis is about fifteen per cent; while for every death there are probably not less than ten persons ill with more or less advanced forms of the disease.

That such a condition of affair does not lead to public panic and flight, as would be the case with fatal diseases that quickly run their course, may be due in part to a feeling of the hopelessness of such a course, and also to the fact that other cities suffer in an equal degree from the same cause; and this common infectious condition springs from the favorable circumstances generally existing, and the thoroughness with which the human field has been strewn with the seeds of this disease.

The Scripture story of the sower and the seed has been very useful to the writer as an aid to a clearer understanding of the behavior of communicable diseases and their incidence on human populations; for while this parable is usually applied in a spiritual sense, it may just as aptly be employed to illustrate the manner of epidemic origin and growth and the influences, adverse or favoring, which such manifestations encounter.

I shall assume that all here present are familiar with this parable—how some seed fell by the wayside and were devoured by fowls, how some fell in stony places and sprung up, but soon withered in the noonday heat because of lack of soil, how some fell among thorns and were choked, but how other seed fell into good ground and brought forth some an hundredfold, some sixtyfold, some thirtyfold.

Could we, in imagination, body forth in human semblance the fevered form of pestilence stalking to and fro across the field of the human world, industriously broadcasting from her wasted hands the seeds of tuberculosis, and note the consequences, we should witness results precisely analogous to those which befell in the case of the husbandman sowing the cereal grain; some seed would fall on human ground so resisting that not only would germination be impossible, but they would be quickly destroyed; other germs would find soil so poor that their scanty growth would soon perish; others would fall where hostile growths would choke them, but other seed would find in different persons that varying suitability of soil that would enable them to yield a harvest of from thirty to one hundredfold.

What are the general conditions or circumstances that so modify the character or diversify the fertility of human soil with respect to this disease? Doubtless, first, would be found a hereditary or natural bent of tissue or organ which enables a luxuriant development to follow a lodgment of tuberculous germs therein. Second, would be a rapid deterioration of native vigor wrought by cur-

rent acute or previous exhausting disease. Third, would be gradual impairment of resisting power through bad surroundings, foul air, poor food, lack of sunshine, damp and dirt—briefly, the picture universally presented in overcrowded habitations, where all these factors prepare the human soil for disease, and where the morbid germs fall most thickly through the ignorance or negligence of the sufferers or their associates.

From the foregoing it follows that there are two principal ways by which control of the spread of this disease may be secured: one by the destruction of the seeds immediately as they are given off by the sick persons, the other by the sterilization of all soil suitable for their reproduction; while a combination of both methods would accomplish its practical extinction. The instant destruction of all seeds given off would imply a knowledge of every person harboring the disease, and the recognition by all such persons of the dangers to themselves and the public of the dissemination of such germs; while to reach and maintain a state of reasonable hygienic safety would demand constant medical and sanitary oversight, with diligent public teaching as to the risks attending any default or carelessness in this respect.

The physical upbuilding of persons prone through hereditary or acquired causes to offer a kindly soil to this disease would be a slower matter, for so long as economic conditions continue to abridge the native right of man to wholesome environment—to his birthright of clean air, free sunshine and other natural accessories to health—by forcing a considerable share of population into hovels, dens and slums, no striking change for the better will appear; but, meantime, if diseased persons in such circumstances can be instructed and controlled to the extent of destroying in part even the infective matters produced, and their susceptible neighbors and associates thus protected from invasion, certainly a considerable forward step will have been taken. But to be measurably effective the whole world must join in, for the speed of travel to-day is such that the antipodes is our neighbor, and coughing cases of this disease can girdle the earth in a few short months, sowing infection broadcast daily if they will.

A pestilence so deeply rooted in population conditions and of such world-wide extent as tuberculosis cannot be successfully combated by superficial means—no measure can avail as a remedy that is not radical in its nature, reaching to the springs and sources of the malady; but until public conscience and enlightenment shall decree that the conditions which beget hectic hot-beds, fever nests, consumption dens, and human rookeries shall be no more, municipality and state must make the best fight possible with the means available; and as disease, like all other forces in nature, obeys a law to which there is no exception, in that it follows the line of least resistance, the opportunities for its spread must be curtailed to the greatest possible extent by acceptable methods of destroying sputa, sterilizing dwellings, fabrics, etc., safeguarding meat and milk supplies, and by the removal of the indigent sick to special institutions designed to afford to them every advantage that pure air, clear sunshine, good food and general wholesome conditions can command.

CLINICAL REPORT.

ABDOMINAL TUMORS.

BY JESSE S. MYER, M. D., of St. Louis, Missouri.

The following cases of abdominal tumors which came under my observation during the past year present points of sufficient interest to justify their being reported.

MALIGNANT TUMOR OF THE KIDNEY.

H. C., a tailor, age forty-four years, was referred to me by Dr. Schwab, in March, 1901. Family history good. He came to St. Louis in April, 1898, weighing one hundred and ninety-two pounds. Prior to that time he claims never to have required the services of a physician. Two months later he began complaining of "burning pains" in the epigastrium, accompanied by eructation of gas. He attributed this to the ingestion of large quantities of soda water. In August he began vomiting immediately after eating. The vomitus was very sour, both to the taste and smell, but at no time contained blood. Frequently the "food seemed to lodge on the way down," and he was compelled to drink water to relieve this sensation. Much mucus was expectorated, which he thought came from the stomach. In October his weight had decreased to one hundred and sixty-four pounds. The attacks of vomiting would cease for a month or more and then begin again. Appetite remained good throughout; in fact, he must frequently restrain himself from eating too much. In spite of this he has gradually lost strength, until now it is an effort to climb a single flight of stairs. Has been at his work regularly, however.

The bowels have been fairly regular at all times; there has never been diarrhea, and the stools, to his knowledge, have never appeared black.

With the exception of occasional palpitation of the heart, which has developed only within the past few months, there have been no symptoms referable to the respiratory or circulatory systems. He has never noticed swelling of the face or extremities; has had no eruption on the body, and denies ever having had any venereal disease.

A year ago there passed with the urine what he took to be a small clot of blood. He experienced no pain or disturbance in urination at the time, and was unable to attribute this phenomenon to any definite cause. (This was practically the only point of any importance that could be elicited with reference to the urinary tract.)

In August, 1899, his attention was called to an "enlargement in the left side" of the abdomen, and he was informed that it was of the spleen. The gastric symptoms have persisted throughout his illness, and are even now the source of his greatest discomfort. It has now been eight months, however, since he vomited. His weight (March, 1901) is one hundred and forty-five pounds.

The patient appears somewhat cachectic; the skin is pale and livid, and the extremities cold. The left side of the abdomen is slightly distended, and is occupied by a solid mass extending from the free costal margin above to a point opposite the anterior superior spine of the ileum below, and to the median line internally. The greater portion of the mass is contained in the lumbar and umbilical regions. The surface of the tumor is somewhat irregular, especially the lower border, which is decidedly indented. At a point just above the umbilicus there is a small nodular mass as large as a hickory-nut on the surface of the tumor. Apparently the mass does not extend under the free margin of the ribs. The spleen is percussible. It is neither enlarged nor in any way connected with the

tumor. The mass is immobile, both upon manipulation and upon deep inspiration. Upward pressure in the posterior lumbar region brings it nearer the anterior abdominal wall. Though it can be distinctly felt posteriorly, there is no bulging. It apparently has no connection with the posterior abdominal wall. The patient's temperature ranges from 98° to 99°. The rectal examination is negative.

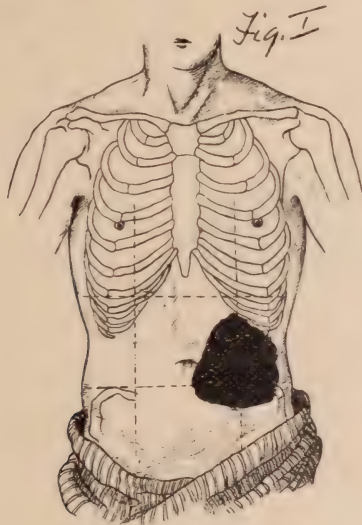
Urine.—1000 cc. in twenty-four hours; sp. gr., 1024; reddish-yellow; acid in reaction, clear; albumin positive (in traces); few hyaline casts; no indican.

Repeated examinations revealed nothing more than this.

The feces show no abnormal elements, microscopical or macroscopical.

Blood.—Slight poikilocytosis; relative increase of the leucocytes, and absolute increase of the eosinophyles.

In view of the fact that the subjective symptoms of the patient had been referred to the stomach throughout his illness, from its very incipency to the present time, my attention was first directed to that organ. The possibility of a malignant growth of the fundus of the stomach, dragging it into the left iliac region, was foremost in my mind. I was greatly surprised upon the introduction



of the stomach tube and inflation of the stomach to find it occupying practically its normal position in the abdominal cavity. This operation was exceedingly painful to the patient. The examination of the gastric contents removed at the same sitting, one hour after a test meal, was still more indicative of the absence of any malignant involvement of the stomach.

Gastric Analysis.—Amount, 100 cc.; perfectly liquid, containing but few morphotic elements; hydrochloric acid decidedly positive; lactic acid negative; total acidity, 80; reckoned as HCl. 0.3 per cent.; peptogenic power normal, etc., etc.

The pronounced superacidity was in itself sufficient to explain the existence of the gastric symptoms. Unfortunately, the introduction of the stomach tube was such a tax upon his strength that I desisted from further examinations of the stomach contents. It would have been of great interest, however, to determine through repeated analyses the true nature of the gastric affection, inasmuch as it is unusual to find such a large amount of hydrochloric acid in the gastric contents of cachectic individuals. The amount of stomach contents removed, its perfectly fluid character, the marked superacidity, his abnormal appetite, together

with certain other of the patient's gastric symptoms, pointed not alone to superacidity, but also to hypersecretion. At any rate, every detail of the examination of the stomach speaks against any relationship existing between the tumor and the stomach. The inflated colon passes over and obscures the outer or lateral third of the tumor.

In spite of the absence of marked urinary symptoms, I felt justified from the foregoing examination in venturing a diagnosis of malignant tumor of the kidney. Consultation with a surgeon was suggested, with a view to possible surgical interference. Three days later I learned that my patient had gone to New York to consult physicians there.

In September, five months after he left my care, I learned upon inquiry from Dr. A. Brayton Ball, of New York, that the patient had died on May 2d, in his care. He regarded the tumor as a "malignant growth, probably retroperitoneal in origin," and inoperable. An autopsy was not granted.

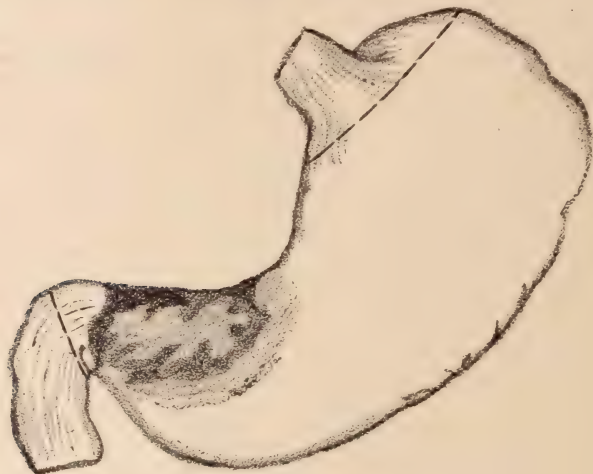


Fig. 2.

CARCINOMA OF THE PYLORUS.

C. G. S., in consultation with Dr. N. B. Carson; foreman in a hair factory; age thirty-eight; large, robust; five feet ten inches in height; usual weight one hundred and eighty-five pounds.

The patient became suddenly ill after a very hearty meal on Thanksgiving Day, 1900, the attack manifesting itself in sensations of "pain, bloating and fullness in the stomach." This was relieved in a measure after much belching, and free evacuation of the bowels. After the initial attack these symptoms followed, to a greater or less degree, every meal. A month later vomiting began, recurring at no definite time; sometimes immediately after meals, sometimes at night, and often in the mornings before breakfast. There were regular paroxysms of vomiting at intervals of three and four days. These gave him relief for a time. He described the vomitus as being copious, brownish in color, a fetid, sour odor, and containing particles of food that had been ingested on previous days. He was not conscious of having vomited blood. The pain, though more or less constant, was severest just before the attacks of vomiting. In the beginning of his illness all food caused him nausea, later meats only. He had had a slight cough ever since taking up his present vocation. The bowels have always been regular.

The patient entered the hospital February 17, 1901, weighing one hundred and forty-five pounds. In spite of the loss of forty pounds within three months, he still appeared fairly well nourished, muscular and strong. He was

able to be up and around and rebelled against being kept in bed. Though somewhat anemic, he showed no signs of cachexia. After the gastric symptoms were alleviated through lavage and proper dieting, he felt quite comfortable, complaining only of increasing weakness and lassitude and slight pains more or less continuous in the epigastrium.

The physical examination elicited pain upon pressure in this region, a slight resistance to pressure over the right rectus muscle on a level with the eighth and ninth costal cartilage. A tumefaction could neither be percussed nor palpated. The resistance, however, was quite constant. There were no enlarged lymph nodes or edema. Inflation of the stomach revealed the greater curvature at the umbilicus. Palpation of the inflated stomach, likewise the rectal examination, gave negative results.

February 21, 1901.—*Gastric Analysis*.—Ewald test breakfast removed one and one-quarter hours after ingestion; amount, 100 cc.; semifluid in consistence, forming two layers upon standing; acid in reaction; free HCl. negative; lactic acid positive; total acidity, 13; peptogenic power good (digesting blood fibrin in one hour). Yeast cells in branches. Flaxseed taken eighteen hours previously had entirely disappeared from the stomach and were found in the feces.

March 1st.—Ewald test breakfast; time, one hour; amount, 200 cc. HCl. negative; lactic acid in large amount. Orange eaten on previous day found in the contents.

March 7th.—Time, one hour; amount, 600 cc.; semifluid, forming three layers upon standing; odor decidedly sour; color that of weak coffee; HCl. negative; lactic acid and butyric acid positive; total acidity, 56. Yeast cells in branches; oil globules and muscle fibers, remnants of butter and meat taken the day before; bits of orange, and long non-motile bacilli (probably Opler-Boas).

Patient complains of pain and fullness in the epigastrium; inclination to vomit; poor appetite. The lower curvature of the stomach is now two finger-breadths below the umbilicus. Weight, 144 pounds.

March 11th.—Amount, 400 cc.; marked fermentation; HCl. negative; lactic acid positive; total acidity, 38. Yeast cells in branches; *sarcina ventriculi* in large numbers; masses of long non-motile bacilli.

In spite of careful treatment, including lavage, a highly nutritious diet, tonics, etc., the gastric symptoms increased, and weight and strength gradually declined.

From the foregoing analyses of the gastric contents, the inflation of the stomach, etc., it was quite evident that a gradual dilatation of the stomach was ensuing. (1) The sudden onset of a gastric disturbance in a man of thirty-eight years, prior to which he was in perfect health; (2) the rapid loss of weight; (3) the persistence of these symptoms, in spite of treatment; (4) the muscular resistance to pressure over the pylorus; (5) the constant absence of hydrochloric acid, and presence of lactic acid; (6) and the gradual development of dilatation of the stomach, all pointed to the existence of carcinoma of the pylorus.

An exploratory operation was advised, with a view to proceeding as existing conditions indicated. Dr. N. B. Carson performed the operation and found at the pylorus a nodular mass about the size of a hickory-nut and a thickening of the stomach wall along the lesser curvature and the posterior wall for a distance of two to four inches. There could be no doubt as to its malignancy. There was no involvement of neighboring organs and but few of the nearest lymph nodes. This seemed an ideal case for total extirpation. Such a procedure was decided upon and executed. The macroscopic and microscopic examination of the tumor revealed an ulcerative adeno-carcinoma, involving the pylorus, lesser curvature and the posterior wall to the extent indicated in figure II. The patient died, after running a perfectly normal course for eight days, as result of peritonitis due to leakage following a tearing of one of the stitches after the first dressing. It is greatly regretted that this unfortunate occurrence prevented our demonstrating the feasibility of total resection of the organ in favorable cases.

[TO BE CONTINUED.]

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EDITED BY

WILLARD BARTLETT, M. D.

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COLLABORATORS:

MAX MICHAELIS, M. D.,

Docent of Internal Medicine, University of Berlin, Germany.

FRANZ NEUGEBAUER, M. D.,

Professor; Director of the Evangelical Hospital, Warsaw, Russia.

JULIUS NEUMANN, M. D.,

Docent of Obstetrics and Gynecology, University of Vienna, Austria.

JULIUS SCHNITZLER, M. D.,

Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,

Berlin, Germany.

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EDITORIAL COMMENT.

THE DIAGNOSIS OF APPENDICITIS.

So much has been written and said on the topic of appendicitis, that the subject can almost be termed hackneyed unless we view the whole matter from a certain standpoint. Strange to say, most authors who have devoted their time to the pathology and therapeutics of this malady have been singularly silent as far as the matter of diagnosis is concerned.

Brilliant operators are sometimes prone to say that every pain in the iliac region of the right side means appendicitis; those who do not go so far in their enthusiasm, still commit the error of saying that the diagnosis of this disease is easier than that of any other which affects the abdominal contents.

Nothing could be farther from the truth than are both of these statements. A variety of disturbances in the functions of certain intra-abdominal organs lead to pain in the right iliac fossa and are in consequence the causes all-sufficient for the above mentioned brilliant operator's demonstrating that "in competent hands" the healthy appendix can be removed without endangering the patient's life. However, the unlucky victim reflects at his or her leisure on the benefits of a carefully made and correct diagnosis while spending two or three weeks in bed, especially if the old-time pain returns or is later accompanied by a reminder in the shape of a post-operative hernia.

Furthermore, the surgeon who pins his faith to "pain in the right iliac fossa" will be seriously handicapped in one of those rare cases in which all the pain and the inflamed appendix are in the left side.

Nothing better illustrates the exceedingly difficult nature of a diagnosis in some of these cases than the following observation from one of our St. Louis hospitals. A man of twenty-six complained for five days of the symptoms which usually characterize the onset of typhoid fever. Then he took to bed, a delirium commenced, there were rose spots, the pulse was slightly rapid and at times the temperature was elevated, but with no typical curve; the highest leucocyte count was 15,000, and no Widal reaction could be obtained at any time. Rectal examination revealed nothing; still a few days later, upon the reappearance of more definite symptoms than those which had in the beginning attracted attention to the right side, laparotomy was performed, and there was found high above the pelvic brim and just to the outer side of the cecum, a walled-off collection of pus amounting to two or three ounces.

In this instance the difficulties in diagnosis had led three painstaking men to consider the case successively one of typhoid fever, traumatic psychosis (a severe blow on the abdomen having been sustained), and finally appendicitis.

We are convinced that this case is but one of many, when we remember how many abdomens are opened and healthy appendices removed, with the result that the patient again experiences the old familiar pain before he or she has left the bed. Nor are these remarks limited to the acute cases only, but consider all the cases of appendicitis larvata (Ewald) in which the sufferer may go for years until the health has been wrecked, without the attention of even the most acute observer having been attracted to the offending minute appendage.

Is then appendicitis so easy of diagnosis? By no means; and the sooner this truth is brought home to a majority of our profession, the sooner will we earn the gratitude of the multitude of those suffering from this disease who yearly entrust their lives to us.

MUNICIPAL FILTRATION IN ALBANY.

The recent annual report of the superintendent of the Bureau of Water in Albany, New York, lays particular stress on the reduction of deaths from typhoid and diarrheal diseases since the establishment of the extensive sand filtration plant in 1899. The filter, which is characterized by Chopin ("Municipal Sanitation in the United States," page 280) as "representative of the best ideas in regard to sand filtration," consists of a series of eight basins with a filtering capacity of nearly fifteen million gallons per day. "In order to protect the filters from freezing they are arched over with brickwork supported on brick piers. The whole is covered with two feet of earth and grassed over. Access is gained through numerous man-holes which are protected by double steel covers. . . . The water is collected underneath the filter by six-inch vitrified drains laid with open joints."

It appears that there has been "a reduction of 67.86 per cent. in deaths from typhoid; of 60 per cent. in deaths from diarrheal diseases, and of 18.76 per cent. in the general death-rate from the average of the ten years previous to 1899." (Superintendent's report.) Apart from the establishment of the filter, there has been no improvement in the general sanitary condition of the city since 1899. Through the co-operation of the physicians of Albany it was determined that of the twenty-seven deaths from typhoid occurring during the year, ten were due to conditions independent of the water supply, leaving seventeen deaths to be charged to imperfections in the system. It is noteworthy that the season of

greatest prevalence of typhoid, formerly concomitant with the season of floods and freshets (winter and early spring), has, within the past two years, been shifted to the fall months, where it properly belongs.

The cost per one million gallons has been \$4.65. The removal of bacteria has averaged 99.1 per cent. Out of forty-eight tests for *bacillus coli communis*, the filtered water gave negative results in thirty-one samples; in the remaining seventeen samples the average was one colony. All samples of "raw" water gave positive results, the colonies averaging eighteen.

ADENOIDS AS A FACTOR IN THE MEDICAL INSPECTION OF PUBLIC SCHOOLS.

Hartmann has found that the hearing is affected in seventy per cent. of all cases with adenoids, and Dench claims that more than half of the diseases of the middle ear are due to adenoid vegetations in the naso-pharynx. When we consider that out of fifteen thousand school children examined by Meyer, nine hundred and twenty, or six per cent., had adenoids, the importance of this subject at once becomes apparent.

It is a well-established fact, since Meyer's first important work appeared calling attention to these growths, that a large percentage of children have been spared from the many ill effects following the failure of the early recognition and removal of adenoids. Still, with all the literature written on this subject since that time, we find these cases largely neglected and many children going on to permanent and irreparable deafness. Yearsley says: "Even in these days of improved medical education and perfected methods of diagnosis, there are still practitioners who have the temerity to assure parents their children will outgrow deafness and discharge from the ears, the latter a constant menace to life. The former equally criminal to neglect, since the sense of hearing is, to some extent, as necessary to the taking of one's place in the community as that of sight."

Besides the ear conditions following the neglect of removal of adenoids, the effect on the physical and mental condition of the child is equally, if not more, important, as many of these children are much retarded in both their mental and physical development. This is especially noticeable in schools, as these children are frequently found in the same classes with children who are much younger than themselves, and they are often mistreated by both parents and teachers.

Granting the importance of hearing, and the effects these growths have on the hearing, adenoids, then, are among the most important of the diseases of childhood; and too much stress cannot be laid on the early recognition and removal of these growths, as much valuable time is often lost in the giving of tonics, and later removing the adenoids after the damage has been done. If our schools could be placed under medical supervision, and a regular systematic examination made of the children at the time of admission, and proper attention paid to this one factor alone, the results would soon manifest themselves.

STATE SANATORIA FOR THE TREATMENT OF TUBERCULOSIS.

Possibly the most beneficial results in the treatment of tuberculosis, particularly in its incipient form, have been obtained from the treatment of this disease in sanatoria. This has been well demonstrated in Europe, and it is more than probable that the same success as that obtained abroad will be reduplicated in America. The fight against the spread of tuberculosis has been inaugurated

on both sides of the Atlantic. A great measure of success will be at hand when we have scattered throughout the land numerous sanatoria for the segregation and treatment of cases of tuberculosis. There is a great need for such institutions. Those who have had experience as medical attendants in eleemosynary institutions will remember how inadequate the means at hand usually are in such institutions for the proper care of tuberculous patients. It is a fact that the consumptive ward in the average city institution might well have over its portal Dante's significant lines: "He who enters here leaves all hope behind."

Hence there are two good reasons why the State should erect numerous tuberculosis sanatoria. Firstly, because the present eleemosynary institutions are not properly equipped for the treatment of tuberculosis. Secondly, because the results of treatment of tuberculosis in sanatoria have far surpassed results obtainable with any other known method of treatment. Acting on these propositions, several States have already taken steps looking toward the establishment of tuberculosis sanatoria to be maintained by the commonwealth. New York has already decided to have her State sanatorium in the Adirondacks. Ohio will soon have her sanatorium in working shape. Resolutions have been passed by the Medical Society of City Hospital Alumni, declaring the need of a State sanatorium for the treatment of tuberculosis in Missouri. A committee from this society is at present taking steps towards securing the accomplishment of the object of these resolutions. The Camden County Medical Society of New Jersey have passed similar resolutions.

The profession of Missouri should see to it that this sanatorium is established. The medical men of every State in the Union should have such institutions founded in their respective States. In this way the treatment of tuberculosis will mean something more than the mere slow death of countless individuals. It will mean the saving of many lives and the prolongation of the lives of many others. It will mean the checking of the spread of the disease, and that, too, without condemning the hapless sufferers to rigid quarantine and foolish inquisitorial inspection at the hands of conscienceless health officials.

OVARIAN PREGNANCY AND OVARIAN HEMATOMA.

Bianchi (1741) and Boehler (1752) first differentiated extra-uterine pregnancy into the subvarieties tubal, ovarian, and abdominal. Researches during the last decade have brought about a correct understanding of this condition, and have tended to show the incorrectness of this classification. An overwhelming majority of writers denied the existence of a primary ovarian and abdominal pregnancy, and affirmed that an ovum ectopically situated could only develop in the tube, and that in cases where a developing ovum was found apparently situated in the ovary or in the abdominal cavity there existed in reality a secondary implantation of an ovum which had been expelled from the tube. As far as abdominal pregnancy is concerned, this opinion is still considered valid. There is even to-day no wholly unimpeachable instance of primary abdominal pregnancy on record. This is not the case, however, with primary pregnancy in the ovary. Tussenbroek's case at least would seem at present to be almost universally accepted as proof positive that an ovum may be impregnated while still within the ovary and may continue its development there. We have at our disposal two explanations for the etiology of this unusual form of ectopic pregnancy. We must assume either that the impregnating spermatozoon penetrates the wall of the un-

ruptured Graafian follicle and thus reaches the ovum, or that the ovum was not swept out at the time of the rupture of the follicle, and that at this moment a spermatozoon entered the follicle and impregnated the ovum. Thus it is readily understood that ovarian pregnancy must be a very rare occurrence.

On the other hand, one encounters comparatively often the condition which is described in almost all text-books as "ovarian hematoma." As soon as the possibility of primary ovarian pregnancy was established, various authorities very naturally advanced the theory that in certain cases of so-called ovarian hematoma the real condition was an ovarian pregnancy. Therefore we frequently see reports of such hemorrhages from follicles and of histological examinations of the specimens. Hitherto these examinations gave negative findings.

This question has been approached by Dr. N. Stone Scott in a somewhat unusual manner. This author published in *American Medicine* (November 23, 1901), under the title "Ovarian Pregnancy—Is it an Explanation of Ovarian Hematomas?", a paper in which he answers this question in the affirmative. The method, however, by which he reaches this conclusion does not seem to us wholly unimpeachable. Scott found in an intraligamentous (!) multilocular cyst one compartment "which seemed from its color to be filled with a dark substance." The contents of this compartment consisted of two portions, which the author alludes to in his description as "placenta" and "blood-clot." The histological examination of the specimen, which was made by the Hammon laboratory, and also by Prof. Welch, of the Johns Hopkins Hospital, determined that the condition was a hemorrhage in a corpus luteum with beginning organization of the blood-clot. No signs of pregnancy were discovered. Nevertheless the writer believes that his case is a true case of ovarian pregnancy. The justification for this opinion he finds in the fact that a piece of "placenta" sent by him to the Cleveland laboratory was found to be a blood-clot in process of organization. This report satisfied him that "retrograde metamorphoses which, of course, tend to obliterate the evidences of a pre-existing living ovum, in proportion to the length of time elapsing between conception and the death of the fetus, take place in the placenta and the fetal tissues to such an extent that within a few short weeks the laboratory can only return a finding of organizing blood-clots." This view of the author is erroneous, and hence also his conclusions regarding ovarian pregnancy. The retrograde changes which take place in the ovum and genital organs subsequent to the death of the fetus consist of degeneration, disintegration, and resorption. In no one of these states does the placenta, for instance, give the microscopic picture of an organizing blood-clot. In a far advanced state of regressive metamorphosis we may perhaps no longer be able to determine microscopically with which tissue we are dealing. But the fact remains that if the placenta is still recognizable macroscopically the microscopic examination will inevitably disclose placental tissue. On the other hand, if the microscope does not show placenta, then our macroscopic diagnosis is in error. We may be permitted, perhaps, to draw the following conclusions from Dr. Scott's report: Both portions examined were blood-clots, the sources of which were, on the one hand, an ovarian hematoma, and on the other a hematocele of a tubal pregnancy. In order to arrive at a reliable diagnosis the specimen should be examined in its entirety. A positive diagnosis of pregnancy cannot be made when the specimen does not show a single evidence of pregnancy. In a very late state of retrograde tissue-change all microscopic evidence may have disappeared. In this state, however, we can no longer speak of "placenta" or "chorion." In conclusion, it may be said that while it is possible that certain cases of ovarian hematomas are in reality ovarian pregnancies, such is very probably not true in the case reported by Dr. Scott.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

Tetanus Following Gelatine Injection.—F. KUHN (*Muenchener Medicinische Wochenschrift*, November 26, 1901).—Subcutaneous injections of gelatine have been recommended by different authorities in cases of severe hemorrhages of all sorts otherwise uncontrollable; and in cases of aneurism. Early in the employment of gelatine a warning note was sounded by Schober, Gerhardt and others as to possible dangers which may result from it.

If we would use the commercial gelatine for injections, we must disregard entirely our knowledge of toxines. That putrefactive products play a role in its preparation is evinced by the odors emanating from such a plant. The author reports a case of hemophylia in a boy twelve years of age. An uncontrollable hemorrhage followed an adenoid operation. Fifty cubic centimeters of a two per cent. solution of gelatine were prepared by the druggist, sterilized according to the usual methods, and injected into the thigh. Gangrene resulted at the point of injection on the third day, and on the fifth day there was trismus and opisthotonos. Death soon followed. Animal experiments proved conclusively that the patient died of tetanus. Inasmuch as certain bacteria are so tenacious of life, and sterilization uncertain, the author recommends that gelatine be used for hypodermic injection only when prepared from the gelatine-bearing tissues of healthy animals.

Four Cases of Tetanus.—HERHOLD (*Deutsche Medicinische Wochenschrift*, No. 29, 1901), reports four cases of tetanus, three of which resulted from wounds infected with dirt, and the fourth following a gunshot wound. In two cases tetanus antitoxin was employed twelve days after the infection took place. The action was satisfactory in both cases, though one died as a result of extreme weakness. The author recommends the prophylactic use of the tetanus antitoxin in all wounds infected with dirt. This will be possible only when the price is decidedly lower.

A Case of Tetanus Cured.—E. V. LEYDEN (*Deutsche Med. Wochenschrift*, No. 29, 1901), reports a case of tetanus which recovered after the use of Behring's serum. Jacob's dural injection was made. At the time of the first injection the temperature was 41° C. After the injection it decreased to 38.5°, and the next day to 37.4°. The change was so prompt and so marked after the injection that there could be no doubt as to the cause. A second injection brought about no change. A careful search revealed no point of injury. The case, however, was a typical one and a very severe form. Some of the cerebro-spinal fluid injected into mice produced tetanus. Chloral or opium should be used in connection with the Jacob dural injection.

A Case of Epidemic Dysentery in a Fetus.—MARCKWALD (*Muenchener Medicinische Wochenschrift*, No. 48, 1901).—A patient, in the seventh month of pregnancy, came to the hospital presenting symptoms of severe dysentery. Two days later spontaneous labor resulted, and a deeply asphyxiated child was born. All efforts to save it were futile. The post-mortum revealed in the intestines the

lesions of dysentery. Cultures from the blood in the right ventricle showed the presence of the bacillus dysenteriae (Kruse). This is the only case reported in the literature in which it has been definitely demonstrated that dysentery is directly transmissible from the mother to the fetus in utero.

A Case of Atropin Poisoning.—SELO (*Muenchener Medicinische Wochenschrift*, November 26, 1901) relates a case of atropin poisoning in which a boy swallowed a grain of atropin. It was discovered three hours later, when the stomach tube emetics, etc., would have been useless. Chloral was given per rectum. He made a complete recovery within a few days, complaining at the end of the tenth day only of a slight headache, "dryness in the throat," etc. The case demonstrates the possible outcome of poisoning in which fifty times the maximum dose was ingested.

The Influence of Rectal Injections of Alcohol on the Gastric Secretions.—SPIRO (*Muenchener Medicinische Wochenschrift*, November 19, 1901).—Inasmuch as it has been proven that rectal injections of alcohol influence the gastric secretions of dogs, the author conducted experiments upon patients to determine if there be a like influence. Alcohol in different forms was injected into the rectum after it had been flushed with water, and the gastric contents were expressed every half hour until three or four specimens were obtained. The following conclusions were reached: (1) Absolute alcohol and alcoholic drinks given per rectum stimulate the gastric secretions. (2) The action begins usually after the introduction of 7-10 ccm. of absolute alcohol or alcoholic beverages representing that amount of alcohol. (3) The largest amount of acid is present about an hour after the injection, and then gradually decreases. (4) In cases of achylia and carcinoma ventriculi, the injections of alcohol are not productive of these results.

The Role of the Myocardium in Pericarditis.—STENGEL (*Journ. Am. Med. Assn.*, December 14, 1901).—Pericarditis is a condition of danger: (1) As a focus of infection. (2) As a cause of mechanical or reflex disturbance of the heart action. (3) As a starting point for a spreading inflammatory lesion. The circulatory disturbances of pericarditis are more often due to changes in the heart muscle than to mechanical or reflex disorders of the organ. In pericarditis there may be simultaneous involvement of the muscles of the endocardium or of all. The latter condition is known as endo-pericarditis. The myocardial element has, prior to this time, escaped the notice of the clinician, though for some time recognized by the pathologist. Fibroid degeneration of the heart muscle is even of greater importance clinically than fatty degeneration of the heart. Fibrosis, accompanying chronic pericarditis, results from circulatory disturbances or through direct extension. The best evidences of myocardial association with pericarditis are derived from physical examination. Hypertrophy is very rapid in these cases, due to degenerative processes; the pulse is weak and of low tension. The irritable impulse of Martins accompanied by a quick weak pulse is quite indicative of myocardial association with pericardial disease. Pericarditis is the diagnosis of the future, and the final prognosis will largely depend upon the degree of involvement of the myocardium.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Practical Uses of Omento-Plasty.—HERMES (*Deutsche Zeitschrift fuer Chirurgie*, Bd. 61, Hft. 5-6).—The author speaks of the fact that it has for a long time been common to reinforce with omentum, suture lines in normal gut or stomach after the completion of gastro-enterostomy, etc. This structure was of decidedly more use to him however, in a case which he cites; he had to deal with a large gastric ulcer, and though his sutures were carefully applied, most of them tore their way out; there was nothing left to do but sew the omentum to the edges of the stomach wound; this he did and the result was as good as could have been had the stomach wall been closed in the usual way. The second case illustrating the same principle was one of pyloric carcinoma adherent to the abdominal wall; here a six cm. rent complicated the separation of adhesions. Here again the condition of the coats of the stomach rendered accurate suturing impossible, so after having several threads partly cut their way out, the surgeon contented himself with plastering omentum over the remaining defect, and with as good a result as in the first instance.

Only once has he seen the omentum fail to perform similar duty: in this case there had been extensive contusion of the intestine at the site; as a consequence there resulted a fecal fistula. The most remarkable case noted was one in which there was removed a large cystic tumor from the pouch of Douglas; here was found a large perforation into the rectum, situated too deeply for suturing; the same was covered with omentum over which a gauze pack was placed, and healed without a fistula resulting. Histological examination has shown that columnar epithelium is in time produced from the intestine and stomach wall to clothe this new cover of a defect.

Carcinoma of the Male Breast.—WARFIELD (*Bulletin of the Johns Hopkins Hospital*, October, 1901).—The explanation accepted by our author for the fact that cancer of the breast is more common in the female than in the male is that the female organ, on account of its function, is exposed to many more traumata and irritants than is the same organ in the male. Thirty-two cases have been reported in the literature since 1890, of which five new ones are reported by the writer. Out of 307 breast cancers admitted to the Hopkins Hospital, only four were in men; a still lower ratio being reported from one of the London hospitals. The most of these tumors proved to be carcinoma simplex, showing in general no great difference in this respect from a like growth in the female. As far as removal and recurrence are concerned, these tumors in men bear a close relation to those which occur in women. One especially interesting report our author prints in full; this man, aged forty-seven, developed metastatic growths in various bones, although the internal organs remained free from involvement after removal of the primary focus. He died from spinal compression, and at the autopsy the mass which had caused the symptoms was found.

The Operative Treatment of Ileus.—PREINDLSBERGER (*Wiener Klinische Wochenschrift*, November 7, 1901).—Three cases are related with a mortality of sixty-six and two-thirds per cent. Two of them present unusual features, hence this review. The first patient was a child of six years, who presented symptoms of acute stoppage; laparotomy was done and an invagination found. This was withdrawn with fair ease and the child did perfectly well for eight days, at the

expiration of which time the same symptoms recurred. At a second operation exactly the same state of affairs was found as had obtained the first time. Though reposition was again easy the child never revived and died thirty hours later.

The second case was that of a boy fifteen years old; he had presented obstructive symptoms for five days, and at the operation two bands were found and liberated, but death ensued in a few hours.

The third patient was a man of sixty-five years; he also had been sick for five days and was in a terrible condition. At the laparotomy there was found a volvulus of the cecum, which was straightened out and the organ sutured to the anterior abdominal wall to prevent a recurrence. Soon after gas began to pass, then feces in immense quantities, and the man went on to complete recovery.

Chloroform, Ether and Lumbar Cocain Anesthesia.—MAUCLAIRE (*Gazette des Hopitaux*, December 5, 1901).—The chloroform should be of known purity, and to this end the doctor must prescribe a certain brand; a sure test of purity is this: pure chloroform will not irritate the nasal and other mucous membranes. To avoid intoxication the patient must get not more than eight parts of the drug for every one hundred parts of air. As to the heart lesions in which this drug is contra-indicated, the author says they are but two, viz.: myocarditis and asystolie. In all other cardiac conditions it can be used with impunity. Bronchitis is, as far as the lungs are concerned, the only contra-indication from this side. Certain general morbid conditions forbid the use of the drug: they are septicemia, diffuse phlegmon, hyper- or hypothermia with pulse disturbance.

In all toxic conditions it is better to stick to local anesthesia and operate rapidly.

The article next takes up the different methods of administering the drug, and treats it exhaustively. After the completion of this part of the subject he treats of the various means which have been employed for reviving patients who have presented toxic symptoms of a dangerous nature. Ether he would use only where chloroform is contra-indicated; and as lumbar use of cocain, he can neither commend or condemn it until definite indications for its use have been established.

Injury of the Vena Cava in Nephrectomy.—LINDNER (*Muenchner Medizinische Wochenschrift*, November 26, 1901).—This unusual accident happened to Lindner's patient, a man of sixty-two years, whose kidney he was in the act of removing for the cure of a large movable tumor which affected the right organ. The mass was being delivered from the wound when there shot up from the depths a tremendous stream of dark blood, causing the operator to exclaim that the vena cava had been torn. As soon as the wound was clear enough to permit of its depths being inspected, it was seen that this was exactly what had happened. The two ends were caught and ligated, but the patient died in a few hours as the result of air having entered the heart. It was shown that a part of the vena cava had been completely grown around by the tumor, consequently in removing the same the involved section of the vessel was torn out. Eight such accidents are reported in the literature. Twice the same vessel has been ligated as an operation of choice, and without causing the death of the patient: a fact of decided interest to physiologists and surgeons.

Some Practical Points in the Treatment of Cases of Fractured Pelvis with Ruptured Bladder and of Cases of Ruptured Urethra.—This is an injury which, according to C. J. BOND (*The Lancet* November 23, 1901) is especially characteristic of the hunting field, where the rider is thrown and rolled upon by the horse. The anterior wall of the bladder is almost always torn extraperitoneally, and the preves-

ical space must be opened to evacuate blood and urine. The membranous urethra, too, may be ground off between the ends of the fractured bones. If the bladder can be sutured, well and good; but where this is impossible, it is best to drain it with a tube which passes in at the rent and out through the meatus internus and on through an opening in the perineum. Where the urethra is sutured, the same is to be drained posteriorly to the suture and no catheter retained if first intention is to be expected. After rupture of the urethra where the bladder has to be drained in the way above indicated, a catheter must be finally passed and used as a permanent guide over which the urethral channel establishes itself: this is best done by introducing a sound in the usual way and letting the same come out at the perineal wound; it is next armed with a catheter and withdrawn; then the sound is inserted through the bladder wound and allowed to pass out through the perineum, where it is armed with the free end of the catheter and one more withdrawn.

Resection of an Esophageal Stricture.—BRAUN (*Deutsche Zeitschrift fuer Chirurgie*, Bd. 61, Hft. 5-6).—The patient, a girl of nineteen, had swallowed sulphuric acid about a year before the operation. At the time she presented herself there was an almost complete stricture just below the cricoid cartilage. She was able to swallow fluids, but most of the time no solid food. At the operation the esophagus was opened longitudinally, and then one and one-half cm. of the tube resected, including the stricture. Six catgut sutures were applied and the wound united by first intention. Through the above mentioned slit above the resected portion a stomach tube was introduced and allowed to remain in position, through which the girl was fed; the external wound closed up to the opening for the tube, and this was easily closed secondarily. Ten years later the woman was in perfect health and could swallow anything. Three other cases from other surgeons are given briefly: these are said by Braun to constitute the entire surgical literature of the subject.

Frontal Abscess of Nasal Origin Cured by Operation.—HERZFELD (*Berliner Klinische Wochenschrift*, November 25, 1901).—There are but seven such cases in the literature of this subject. This patient had taken cold six weeks previous to coming under the care of our author. Later headache and dizziness developed with a sensitive area over the eye-brow on the affected side. The patient had fever and the pulse ran high. Some time later the pulse became so reduced in its frequency that the author decided that brain compression must be developing, so determined on surgical interference. Pus was found in the frontal sinus, the posterior bony wall of the same was seen to be carious and the dura bulging into the wound. This was incised and a quantity of pus exuded, after which the finger could be pushed into a considerable cavity in the frontal lobe. All symptoms disappeared at once, and in five weeks the external wound had completely healed. Of the above mentioned cases in the literature, but one was cured by an operation.

The Surgical Treatment of Biliary Calculi, with Special Reference to Hepatotomy.—DAVIS (*Journal of the American Medical Association*, December 14, 1901).—This interesting article details experimental as well as clinical work of no little interest. His idea is to relieve the stagnation of bile by an incision into the liver substance, in cases where there is an obstruction, and where the obstructed ducts are not to be reached for some cause or other. Various experiments on the lower animals demonstrated the entire practicability of such a procedure by showing that it is possible to easily drain in a backward direction the congested biliary vessels in the liver.

The Operation for Hypospadias.—BECK (*Deutsche Medizinische Wochenschrift*, November 7, 1901).—The article opens with a history, in brief, of the procedures which have been adopted to combat this congenital defect. The author has devised several ingenious methods of his own, and seems to have met with good success in their application. One is to dissect free the short urethra and then stretch it forward to the end of the glans, where it is sutured in place beneath flaps made from the parenchyma of the same; or the glans may be pierced and the end of the urethra drawn through the hole thus made. There results no harmful curve in the organ, as the urethra can be stretched as much as desired. The younger the individual, the better this can be accomplished.

THERAPEUTICS.

IN CHARGE OF

WALTER BAUMGARTEN, M. D.

Modern Iron and Blood Preparations, and Their Employment in Practice.—MARCUSE (*Heilkunde*, 1901, Hft. 4 and 5).—Marcuse subjects the modern preparations of iron, containing "organic iron," to a searching criticism, including in this list ferratin, carniferrin, fersan, the albuminates and peptonates of iron, the tinct. ferr. Athenstaedt, iron somatose, and the blood preparations of iron (hematogen, hemalbumin, hemol and hemogallol, etc.).

Conclusive experiments by noted workers have left no room for doubt (1) that the therapeutic action of iron depends upon the specific stimulant effect on bone-marrow, the blood-forming tissue; (2) that the stimulus is followed by an increased and more rapid development of the young blood cells into non-nucleated red blood corpuscles; and (3) that iron produces this result as such, and not in virtue of some complicated combination of elements. The simplest as well as the most complex preparations are absorbed through the intestines, and reach the bone-marrow through the circulation, but the complexity of the preparation in no way facilitates this process. The fact that some preparations, such as ferum reductum and Bland's pill, are well borne and others are not, does not affect the question of the absorption of iron and its specific action. It does not matter greatly what preparation of iron is administered, provided it contains a sufficient quantity of iron.

The employment of the hemoglobin preparations appears to be irrational in so far as their iron content is small as compared with some of the officinal preparations, so that the result obtained by small doses of the latter requires very large doses of the former. The hemoglobin preparations are more properly stomachics, which stimulate the appetite, and, therefore, improve the general condition, but do not yield the striking results of other preparations containing more iron. As a substitute for proteids in diet, they are disproportionately expensive.

Iron Therapy, etc.—E. ROST (*Therapie d. Gegenwart*, August, 1901).—It has been proven experimentally that animals which have been made anemic will assimilate iron when fed salts of iron. The quantity of hemoglobin may in this way be increased, as well as the total quantity of iron in individual organs (the liver, spleen and bone-marrow) and in the body as a whole. The duodenum and the adjoining portion of the jejunum have been shown to be the portions of the intestines through which iron is absorbed, irrespective of the iron preparation administered. The metal is always absorbed as an inorganic salt, whether given as a salt, as hematogen, hematin, or in the food; in animal experiments

it can be found only as an inorganic salt from the moment it is absorbed into the epithelial cells of the intestinal wall. Whether the increase in blood formation is due to the direct formation of hemoglobin or indirectly to the stimulation of the blood-forming organs is still an open question, but is comparatively unimportant in relation to treatment. Bland's pill, the type of the inorganic iron preparations, certainly maintains its pre-eminence among all forms of iron. Should it be necessary to increase the quantity of albumin which a patient receives, it would be far better to prescribe a diet richer in proteids than to give the disproportionately expensive albumin preparations (hemoglobin, hematogen).

The Influence of Diet in Epilepsy on the Course of the Disease.—SCHLOESS (*Wiener Klin. Wochenschrift*, November 14, 1901).—Schloess has experimented systematically with the various diets which have been advocated in epilepsy, taking the precaution of keeping the existing medicinal treatment unchanged throughout the experiments. The material at his disposal consisted of cases of epilepsy of several years' duration.

His results are summarized in the following:

1. An exclusive milk and vegetable diet does not reduce the number of attacks; nor does an exclusive meat diet increase them.
2. A diet containing a minimal quantity of sodium chloride, together with the administration of bromides, reduces the number of attacks but does not influence the physical condition. On this diet patients lose weight and strength.
3. A diet of fats and acids has no influence on the frequency of attacks.
4. Moderate quantities of alcohol (up to one liter of beer per day) do not increase the number of attacks.

The Dietetic Treatment of Epilepsy.—BALINT (*Berl. Klin. Wochenschrift*, No. 23, 1901).—Balint declares that too little attention has, until now, been paid to the dietetic treatment of epilepsy, and recommends a diet with a low chloride content, under the influence of which he has seen very good results. He allows one to one and one-half liters of milk, forty to fifty g. of butter, three eggs (not salted), and three hundred to four hundred g. of bread and fruit, which together have a nutritive value of two thousand three hundred to two thousand four hundred calories and a sodium chloride content of little more than two g. Besides this, in making the bread which the patient receives, sodium bromide is substituted for its equivalent of common salt, so that the patient receives in addition about three g. of bromide.

The following conclusions are drawn:

1. Diet containing a minimum of chlorides is applicable to every case of epilepsy and should be tried.
2. Treatment succeeds best in an institution.
3. A rigid diet of small chloride content should be instituted in every case until the character of the disease has been definitely determined.
4. Small doses of bromide may be administered in addition to (3).
5. The method of administering bromides with the foods, especially as a substitute for common salt in bread, is recommended.
6. The sedative action of bromine in this method of administration is greatly increased, and may therefore be employed in other nervous affections in which a pronounced bromide effect is desired.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

Upon the Intracellular Constituents of the Bacillus Typhosus.—MACFAYDEN and ROWLAND (*Centralblatt fuer Bak. Infect. u. Parasit.*, Bd. xxx., No. 21).—The special object of these authors' investigations was the study from a fresh standpoint of the intracellular factors in health and disease, by obtaining directly the cell constituents from the healthy cell and eliminating as far as possible excreted substances and those formed by the cell in a given environment. For the purpose of studying the intracellular structure of the bacillus typhosus, the bacteria were triturated and the cell plasma pressed out by means of a "cold" pressing method devised by the writers.

It was found that the bacillus typhosus produced a hemolysin in various culture media. The bacillus grown in spleen juice, with the addition of serum, produced a hemolysin at the end of eight days; in cultures of broth, at the end of six weeks; and cultures even one year old produced a hemolysin of the red blood cells. The various attempts to demonstrate the production of a soluble toxin by the typhoid bacillus have not hitherto led to any definite results. If the symptoms of typhoid fever are due to an intoxication as well as to an infection, the detection of a toxin would mark an advance in the treatment of the disease by inoculation methods. Typhoid bacilli, when grown on ordinary culture media, do not produce various poisonous soluble products. If the bacillus produces a toxin, then the ordinary laboratory culture media are not suitable vehicles for its origin. It was attempted to cultivate the typhoid bacillus in the fresh juices from various organs of the body, with the view of obtaining its growth under conditions more closely resembling its occurrence in the course of the natural typhoid infection. These experiments were of an entirely negative character. Freshly prepared organic juices do not favor the growth of the typhoid bacillus, nor, as a matter of fact, the growth of a number of other pathogenic organisms which were also tested. The absence of growth was undoubtedly due to auto-digestion of the fresh organic juices and its accompanying autolytic products.

The writers believe that the question of immunity should be approached from the standpoint of intracellular structure of the pathogenic organisms, both as regards the organism and as regards the soil upon which it is grown.

A Study of Chronic Hyperplastic Tuberculosis of the Intestine, with Report of a Case.—LARTIGAU (*Journal of Experimental Medicine*, vol. vi., No. 1).—The writer gives first an historical sketch of hyperplastic tuberculosis of the intestine. He states that it has been rather frequently observed abroad, but there have only been three cases reported in the English language. The case reported by Lartigau was of clinical interest, because it presented the symptoms of Addison's disease. The autopsy table showed the error in the diagnosis. It was found that the individual had suffered with a hyperplastic tuberculosis of the large and small intestine. The anatomical diagnosis made was as follows: Hyperplastic tuberculosis of the large and small intestine; right lobar pneumonia; tuberculosis of the adrenals and mesenteric lymph glands; acute splenic tumor; cloudy swelling of the liver, and slight chronic diffuse nephritis.

The intestine showed the following changes: There was a marked thickening of the intestinal walls, but no ulceration or swelling of Peyer's patches. The most conspicuous feature of the mucosa was the presence of numerous papillomatous masses rather clubbed in form. These outgrowths were most abundant

in the lower ileum, cecum and part of the ascending colon. They were freely movable, but rather rigid masses of tissue with narrow pedicles. They appeared to be covered with normal mucous membrane. The microscopical picture was as follows: The mucosa was considerably thickened with but little change in the epithelial cells. The tunica propria was considerably increased in thickness. Its tissue appeared to be made up almost entirely of closely packed round cells. So great was this cellular infiltration that the gland structures were pushed far apart. The papillomatous growths presented several points of interest. They were directly continuous with the submucous layer, and presented the same general character of infiltration already noted. The number of unstriped muscle-fiber bundles distributed in loose and irregular strands was striking. The more central parts of the papillary growths consisted of bundles of connective tissue rather loosely arranged, in which a number of round cells were discretely spread.

The writer concludes his paper by giving a short description of the treatment of this condition, saying that most of the cases of resection of the intestine for cancer of the cecal region reported without microscopical examination as cured are instances of hyperplastic tuberculosis. He further states that the treatment of the condition is obviously a surgical one, extirpation of the diseased tissue promising good results in a fair proportion of cases.

Gram-Staining Bacilli Found in the Infant's Stool.—CAHN (*Centralblatt fuer Bak., Parasit. u. Infectk.*, Bd. xxx., No. 19).—The paper in hand is mainly a commentary on the previous brochure on this subject issued by Tissier, some of the results of Cahn being somewhat different from Tissier's classical conclusions. Tissier's work was an important contribution, giving, as it did, new bacteria to the intestinal flora of infants, and at the same time tracing somewhat in detail the physiological and pathological relationship of these new species. Among the different new species isolated by Tissier might be mentioned the diplococcus griseus liquifaciens, the coco-bacillus perfeteus, the bacillus anerobicus minut., the bacillus bidifus, and the bacillus exilis. Cahn directed his efforts mainly towards studying the morphology of the intestinal flora of infants, with special reference to the Gram-staining organisms.

His technique consisted of diluting a quantity of sterile water with a small quantity of the stool. Then an öse of this dilution was picked up and put into two per cent. sugar agar, and further dilutions practiced. By means of four dilutions he succeeded in obtaining isolated colonies. He found the acidophilus (Moro, Finkelstein) in the stools of infants fed on breast milk, also in the stools of infants fed on cow's milk, but not in such large quantities as in the first instance. This organism is especially characterized by its numerous involution forms. So peculiar is this involution-form that Cahn doubts that the acidophilus is really a single organism, but thinks that it is really representative of several species or groups. This organism was found in every organ of infants dying of intestinal diseases; also in the heart's blood in these cases. It grows on all culture media, but best in fluid media of acid reaction—4 ccm. of hydrochloric acid to 100 ccm. of the medium, with phenol-phthalein as the indicator.

Another organism staining, according to Gram, which was studied by Cahn was the bacillus exilis. This is a very small, sharply defined rod, growing singly or in chains of five elements in the stools, and practically the same on artificial culture media.

The bifidus communis was also found to stain, according to Gram, being demonstrable in the stools of breast-fed infants as well as in those fed on cow's milk. It is difficult to obtain a pure culture of this organism, because the acidophilus is often mixed with it, and there seems to be a symbiosis between these two species.

Raising the Melting Point of Nutrient Gelatin by Means of Formalin.—VRIENS (*Centraltb. f. Bak., Parasit. u. Infektionskrank.*, Bd. xxx. No. 19).—The writer scores H. J. van't Hoof's article which appeared in Bd. xx., 1 Abt. 368, of this journal, because Hoof did not give anything new on the subject and spoke as if he were giving an important contribution to bacteriologic technique, whereas the same thoughts were expressed long ago. For instance, Brown in 1897 gave similar experiences, as did Trillat in 1898. It is a matter of common knowledge in every laboratory that formalin is poured on stab cultures on gelatin to preserve the growth. Vriens seems to think that the above title should mean that a way has been discovered of raising the melting point of gelatin by mixing it with formalin without rendering the medium unfit for bacterial growth by reason of the bactericidal properties of the formalin. He takes exception to Hoof's misleading title, that is all, and concludes by stating that he will be the great man, indeed, who will discover a means of raising the melting point of nutrient gelatin without taking away at the same time its nutritive value as a culture medium for bacteria.

Concerning the Theory About Fat Staining.—L. MICHAELIS. (*Deutsche Med. Wochens.*, October 31, 1901).—Michaelis follows up the work of Herxheimer in regard to the staining of fat in tissue. He found that the so-called indifferent stains are good staining agents for fat. There are certain weak acid and certain weak basic stains which will stain fat. He believes that this property is due to the fact that all the fat has been extracted from their salts in the process of manufacture, and gives an excellent example in the shape of dimethylamidobenzol.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

On the Operative Treatment of Prolapse of the Uterus.—J. MANDELSTAMM (*Monatschr. fuer Geb. und Gyn.*, September, 1901).—The methods employed by the author were the Freund and the modified Wertheim operation. The former consists in the following: An oval-shaped area is denuded of the mucosa on both the anterior and posterior wall of the vagina. Then the *cul-de-sac* is opened transversely, and the uterus brought down through this hole into the vagina. A communication between the uterine cavity and the vagina is established by cutting through the fundus of the uterus and sewing the endometrium to the peritoneal cover of the fundus. The peritoneum is scraped off from both sides of the uterus corresponding with the areas of the vagina freed of mucosa and the uterus fixed in this position by sewing the corresponding raw surfaces together with catgut sutures. Wertheim has improved this operation in the following way: He denudes only the anterior wall of the vagina and brings the uterus down into the vagina by opening the vesico-vaginal pouch through the anterior fornix. The establishment of a new communication between uterus and vagina is not necessary. Advantages of this modification are: greater simplicity of the operation, less hemorrhage and preservation of the possibility of cohabitation. Mandelstamm performed in one case the Freund, in six others the Wertheim operation.

He considers both operations indicated only in cases of extensive prolapse. In exceptional instances, when the prolapsed parts in consequence of long exposure are considerably hypertrophied or ulcerated, Freund's operation can be performed; in all other cases Wertheim's operation is to be given preference.

When necessary this operation should be combined with a plastic operation on the perineum. Most of these operations will be performed in women after menopause. If a very severe case necessitates the operation before this period, the tubes should be resected after the uterus has been brought down into the vagina.

On the Use of the Uterus, Turned into the Vagina, as a Plastic Support in Operations of Prolapse.—CONSTANTIN J. BUCURA (*Zeitschr. fuer Geb. und Gyn.*, vol. xlv., 1901).—The author gives a report of the immediate and remote results of Wertheim's operation in prolapse of the uterus and vagina in sixteen patients. [A short description of the essentials of this operation is given in the foregoing abstract.—ED.] In only one patient the prolapse recurred. In this case the uterus returned to its pathologic position within ten days after operation. In the other fifteen cases, which were operated from eight months to two years before this article was written and the patients being re-examined, the results were very satisfactory. All patients were again enabled to do their housework. Even those who were obliged to do very heavy work were no longer annoyed by the characteristic bearing-down feeling. All dysmenorrhoeic troubles and disturbance from the bladder had ceased. The uterus was firmly fixed in its new position. In only four cases did the uterus slightly separate the labia when patient was asked to bear down. In the sole case of recurrence the uterus could be seen in front of the vulva. In all instances the vagina was found narrow and of normal length. Four patients complained of pain during cohabitation. In conclusion, Bucura states that Wertheim's operation excludes absolutely the possibility of recurrence of the cystocele, one of the most annoying features of a prolapse. Menstruation and cohabitation are not interfered with by this operation. Sterility, however, is a necessary condition. The tubes must be resected if this operation is carried out in a woman during menstrual life.

Repair of a Complete Laceration of the Perineum in a Girl of Nine Years.—H. A. ROYSTER (meeting of South. Surg. and Gyn. Assoc., Rep. *American Medicine*, November 30, 1901).—The perineum of this girl was torn completely through the rectovaginal septum at her birth. The child's grandfather acted as accoucheur. Owing probably to dimmed eyesight and infirmity, a breech presentation was evidently mistaken for vertex position, and the obstetrician, introducing his finger into what he thought was the child's mouth, but which was really its vagina, exerted traction, and the result was a complete laceration of the baby's perineum. No immediate harm came from the accident, and it was resolved not to attempt a restoration of the injured region until the girl was considerably older. After two operations the author obtained a perfect result.

A Report of Ten Cases of Cesarean Section.—CHARLES L. ILL (*Am. Jour. of Obstetrics*, November, 1901).—The more interesting feature of this report is the fact that it contains the histories of three cases in which Cesarean section was performed on account of dystocia produced by ventrofixation of the uterus. In some instances the reasons given for the performance of abdominal section are decidedly objectionable. Thus in Case VII., first a trial was made with the forceps, then version performed, and finally—because the temperature of the septic patient rose to 102°—the dead child delivered per Cesarean section. Patient died thirty-six hours after operation. All the other patients operated upon recovered.

Critical Remarks on Dystocia Caused by Vaginofixation of the Uterus.—WILHELM RUEHL (*Monatschr. fuer Geb. und Gyn.*, October, 1901).—In this paper an effort is made to save the honor of this operation, which nowadays is looked upon with some contempt. The author is struck by the fact that in nine cases only—this being the number on record—performance of Cesarean section became necessary in order to overcome the dystocia, whereas in hundreds of other cases

delivery subsequent the same operation was spontaneous. After the fundus of the uterus has been firmly fixed to the vagina, the following abnormal conditions should theoretically be expected during confinement: Extremely low position of the fundus uteri, very high position of the cervix, retroposition of the cervix and extreme stretching of the posterior wall of the uterus, the anterior wall at the same time being extended only in a slight degree. In the majority of cases these abnormalities have been found, which, however, have slightly interfered with the course of delivery. By a critique of the histories of the nine cases in which Cesarean section was performed the author tries to prove that vaginofixation itself can be made responsible for the unfavorable result in only two of the cases, while various secondary conditions and operations militated against a favorable outcome of the other seven. In conclusion, the author states that even in very severe dystocia a median incision of the anterior lip and uterine wall will be found sufficient to avoid Cesarean section.

Clinical Observations on Carcinoma of the Uterus.—W. BECKMANN, St. Petersburg (*Zeitschr. fuer Geb. und Gyn.*, vol. xlv., 1901).—In this article are given clinical observations made in 226 patients suffering from inoperable carcinoma of the uterus or recurrence after operation. The article contains a great number of noteworthy points, the most interesting of which are the following: The majority of the patients were between forty and sixty years of age, three-fifths being in the climacteric. There were only two patients younger than thirty, none under twenty. These 226 patients had borne 1161 children—*i. e.*, an average of more than five births per patient. Only 5.4 per cent. were non-parous; again 11.3 were confined more than seven times. These figures seem to confirm the observation that susceptibility to carcinoma is increased by a more intensive sexual life. The first symptoms observed were: Irregular hemorrhages in 79 per cent., vaginal discharge in 12 per cent., menorrhagias in 4 per cent., pain in 5 per cent. There was in 10 per cent. an absence of any large hemorrhage during the whole course of the disease. Regarding the pain, the writer states positively that in patients suffering from recurrence after operation the pain was more severe and it was more difficult to relieve them than in unoperated cases. In 55 per cent. the vagina was affected by the disease. Often the disease was diagnosticated in women who were well nourished and apparently pictures of health. Exitus letalis was due to disease of the kidney in 71 per cent., to cachexia and marasmus in 13 per cent., to intestinal symptoms in 14 per cent., to incidental complications (apoplectic insult, endocarditis, etc.) in 2 per cent. The duration of the disease in unoperated cases was on an average from one to two years; only a few lived longer than two years. In operated cases the duration was from two to three years. The figures obtained show clearly that operation prolongs life.

In the inoperable cases the author had the best results when he did not touch the carcinoma at all. Even palliative operations should be done only if necessitated by hemorrhages. He provides free drainage of the secretion by often repeated vaginal douches with solutions of bichloride, potassium of permanganate or creolin. The treatment of most of the other symptoms is limited to a considerate use of morphine.

Carcinoma, Pregnancy and Labor.—S. S. CHOLMOGOROW, Moscow (Abst. *Centrabl. fuer Gynaek.*, November 16, 1901).—The author advances the following rules: 1. In cases of operable carcinoma of the cervix in an early stage of pregnancy, vaginal panhysterectomy should be performed. 2. If the pregnancy is as far advanced as to the sixth, seventh or eighth month in cases of operable carcinoma of the cervix, the child should be removed by means of vaginal Cesarean section (after *Duchrssen*) and the uterus extirpated *per vaginam* at the same time. 3. In cases of operable carcinoma at full term, abdominal Cesarean section should be performed and the uterus extirpated at the same time *per abdomen*.

4. In all operable cases the uterus should be removed through the vagina immediately after spontaneous or instrumental delivery. 5. In cases of inoperable carcinoma at full term, Cesarean section after Porro should be performed (the extirpation of the uterus being advisable on account of the non-aseptic condition of the patient). If in cases of inoperable carcinoma the child is not yet viable, Cesarean section after Porro should be postponed to the end of pregnancy.

PEDIATRICS.

Intrauterine Rickets.—ABBOTT (*Ped.*, December 1, 1901).—The conclusive cases of rickets in utero are still very few. Undoubted cases have been reported by Barlow and Makins.

The author's case was fourteen months old when first seen. Her length was only twenty-one inches, and she weighed seven pounds six ounces. She died shortly after admission to the hospital. The prominent symptoms were: Large cranium, but no frontal or parietal bosses; the sutures open, sternum prominent, chest grooved, rachitic rosary, abdomen full and prominent, the clavicle greatly curved, the humeri also curved, and great thickening of the lower ends of the radius and ulna.

The femora gave one long curve, and the right leg showed a tremendous curve. The feet were in position of extreme varus. The child had always been weakly. The bones were soft to an extreme degree. All could be visibly bent.

The baby was one of twins, and the mother is very definite that the girl's legs at birth were "quite the same as they are now." The twin brother is very much like the girl. From a consideration of the history and condition of the bones the author concludes this to have been a case of true intrauterine rickets.

A Case of Secondary Anemia with Splenic Tumor.—MARSE (*Ped.*, December 1, 1901).—The writer reports a case of anemia which in its clinical history very much resembled the anemia infantum pseudo-leukemia. The patient was a female, one of twins, and nine months old. She was fairly developed and nourished, but there was moderate pallor of the skin. The liver was slightly and the spleen very much enlarged. Blood examination: Hemoglobin, 40 per cent.; red-blood corpuscles, 4,000,000; leucocytes, 18,750; small mononuclear, 34 per cent.; large mononuclear, 12.6 per cent.; polynuclear neutrophils, 51 per cent.; eosinophiles, 0.2 per cent.; myelocytes, 1.8 per cent.

Under the administration of modified milk, beef-juice, oil, malt and iodide of iron the patient rapidly improved. The spleen rapidly diminished in size.

The cause of the condition in this case was the feeding of a very dilute milk mixture. No digestive disturbance existed.

The author claims that there is nothing specific in the so-called splenic anemia.

Primary Intestinal Tuberculosis in Children.—BOVAIRD (*Arch. Ped.*, December, 1901).—The question of the relation between human and bovine tuberculosis has been brought so prominently before the world by the recent address of Prof. Koch that it seemed to the writer of interest to present certain relevant data which he had been collecting for several years.

It must be admitted that fifteen to twenty per cent. of all cattle are tuberculous, and at the same time that the danger to children lies in milk contaminated or infected from tuberculous lesions of the udder, and that such udder disease is limited to from three to five per cent. of tuberculous cattle. Simple arithmetic would show that the milk of at most one per cent. of all cows is capable of pro-

ducing tuberculosis. But a single cow may contaminate the milk of a whole herd.

Various investigators have found two to twenty-five per cent. of samples of milk to contain tubercle bacilli. The digestive fluids, however, may destroy the bacilli; yet it must be admitted that the milk of tuberculous cattle is capable, when ingested, of producing tuberculosis in susceptible animals.

There is great scantiness of evidence available that tuberculous milk has produced tuberculosis in children. He has found only twenty-two cases recorded in which the relation between tuberculosis and tuberculous milk is fairly clear.

In the study of various reports he finds that the Germans find four per cent. of primary intestinal tuberculosis, the French none, the English eighteen per cent., and the American writers one per cent.

He concludes as follows:

1. That English reports alone show any considerable number of cases of primary intestinal tuberculosis.

2. That primary intestinal tuberculosis is a very rare affection among the children of New York, little more than one per cent. of the cases of tuberculosis having this origin.

3. That the proportion of tuberculous cases found at autopsy in New York is lower than that of European observers.

4. That the evidence connecting tuberculosis among children with the consumption of milk of tuberculous cows is very scant.

A Note on the Little Finger of the Mongolian Idiot and of Normal Children.—WEST (*Arch. Ped.*, December, 1901).—Five years ago Telford Smith called attention to a peculiarity in the shape of the hand which existed to a greater or less extent in nearly every case of Mongolian idiocy, and consisted of a marked outward bowing or curving of the little finger. After a careful examination of 605 children the author concludes that 19.6 per cent. show a marked curve, 32.9 per cent. show a distinct curve, 28.9 per cent. a slight curve, and only 18.5 per cent. are perfectly straight. He finds the proportion in the Mongolian idiots about the same.

Ulceromembranous Angina Associated with the Fusiform Bacillus (VINCENT); A Report of Twelve Cases in Children.—SOBEL and HERMAN (*N. Y. Med. Jour.*, December 7, 1901).—In six instances the ulceration was found on the right tonsil, in four cases on the left, and in two on both. The size varied from the nail of the little finger to involvement of the greater part of the tonsil. The shape was mostly irregularly circular and oval. As to its character, the term "chancreoid" seems most fitting. Except for a necrotic base, it looks like a "punched-out" ulcer. The tonsillar inflammation is usually very moderate; when more marked the ulcer appears somewhat deeper and the destruction of the tissue is greater. Only at its incipency does it appear membranous; but even then, if a swab is applied directly against the lesion, the tissue will give way and the swab will enter a cavity. The color in different cases is either yellowish, greenish-gray or a dirty light brown; but all have in common the sloughing base with the level or slightly raised edges.

In all cases there was some elevation of the temperature (101° to 103.4°).

The submaxillary glands were enlarged except in two cases. The symptoms are usually entirely local—pain and difficult deglutition.

Clinically it differs from diphtheria, in that it is an ulcerative process, in the absence of tendency to spread beyond the tonsil, and in the usual absence of asthenia and constitutional symptoms.

The principal reliance must be placed in the microscopical appearance. Carbol-fuchsin, diluted, is the best stain.

The characteristic bacillus is about twice as long as the Klebs-Löffler ba-

cillus, and is fusiform. Some are bent so as to form a crescent. They vary somewhat in size. It is motile. It has no spores. It is decolorized by Gram.

The spirillum associated with them is long and cork-screw-like. It is motile. It is decolorized by Gram. Little reliance can be placed on cultures, as they are cultivated with difficulty. In the way of treatment, they recommend the local application of Lugol's solution.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

Brain Symptoms in Carcinoma.—ALFRED SANGER (*Neurologisches Centralblatt*, December 1, No. 23, 1901).—In 1888 Oppenheim and Bettelheim published cases of carcinoma in which were present definite localized cerebral symptoms. The autopsies showed no pathological change sufficient to explain these symptoms. The theory was advanced that the toxins, originating from the new growths, caused the symptoms, but were not sufficient to produce anatomical changes. The author of this article believes that this assumption is wrong, and that a more careful microscopical examination will reveal a sufficient anatomic basis for the causation of the symptoms. In support of this he gives the clinical history of a case of mammary carcinoma, in which a right-sided facial and abducens paralysis with bilateral deafness existed. The post-mortem examination showed no pronounced focal alteration in the brain, but a very well-marked carcinomatous meningeal infiltration. In the tissue surrounding the blood vessels carcinoma cells in great abundance could be demonstrated. The author further examined the clinical histories of one hundred and twelve cases of carcinoma, in nine of which nervous symptoms were found. Definite cerebral symptoms were not found in any of them. The following conclusions are advanced by the author: Cerebral symptoms in carcinoma can be divided into two classes: I. General symptoms. These are shown by coma, apathy, dementia. Anatomical findings are not present. The symptoms are probably toxic in origin. II. Focal symptoms: A—No microscopical findings. In these cases there are probably carcinomatous metastases in the meninges or changes which are not evident by our present methods of investigation. B—Microscopical findings: (a) Tumor metastatic masses of various sizes. (b) Softening by hemorrhage without metastases. General and focal symptoms can be combined in the same case.

Certain Mental Changes that Accompany Visceral Disease.—HENRY HEAD (The Gulstonian Lecture for 1901, "Brain," part iii., 1901).—This is a very important contribution to the work already done on the same subject by Head. The main thesis advanced is that grave mental disturbances may arise in connection with visceral disease, based on the assumption that our mental well-being is dependent on the right activity of our internal organs. The following five causes are noted as being of importance: 1. A disturbed activity of the heart may alter the character of the blood with which it is supplied. 2. Disease may attack some organ which in health produces a substance necessary for the normal activity of the tissues. 3. Disease may attack some excretory organ, and thereby lead to the retention of toxic agents in the blood. 4. Disease may so lower the resistance of the nervous system that a poison, such as alcohol, already circulating in the blood, can produce mental changes differing in quality and intensity from those which would have been produced by the same poison under other circumstances. 5. Lastly, disease of the viscera may so lower the patient's resistance that some inherent mental tendency

may become manifest as in active mental disease. Disease of the internal organs is accompanied by pain radiating around the surface of the body and by tenderness of its superficial coverings. Changes in consciousness may be produced by the intrusion of such stimuli upon the nervous system. It is the purpose of this investigation to bring out the changes in consciousness mainly associated with the reflected pains of visceral disease. These mental changes are sometimes recognized by the patients themselves, and are associated by them with the first appearance or progress of their disease. The material for this study was furnished by patients in general hospitals, especially those suffering from pulmonary, cardiac and abdominal disease. Insane and nervous patients or those with a marked nervous heredity were excluded. The changes that may accompany visceral disease are: First, hallucinations, either of vision, hearing, or smell; second, moods. By mood the author means a state of mind in which consciousness is dominated by feeling, but where the resultant state is not projected. An emotion is a state of mind in which projection is always present. Under moods are noted sense of ill-being and exaltation. When the depression has been frequently repeated or has lasted a considerable time, an abnormal state of suspicion is likely to arise in the mind of the patient. The causes underlying all these psychical states are considered in great detail, and the conclusion seems justified that they are associated with the presence of pain of a reflected visceral type. Ten clinical histories are added which illustrate very clearly the main propositions advanced. This paper is earnestly recommended to every one who is at all interested in this important subject, and an abstract can only hint at the wealth of newly discovered facts contained in it.

Definition of Hysteria.—BABINSKY (*Société de Neurologie de Paris*, November 7, 1901).—In a very interesting discussion on hysteria, Babinsky brings forward certain facts relating to the general conception of hysteria, and gives the reasons why a definition of this disease presents so many difficulties. Lesegue has declared that it is impossible to define hysteria, and that no satisfactory definition will ever be proposed. This would mean, if true, that hysteria is not distinguished from other nervous diseases by any characteristic group of symptoms and that therefore it should be taken out of the nosology of medicine. In order to formulate a satisfactory description of hysteria, it is necessary to determine the characteristics which are frequently observed in the disease and which exclusively belong to it. If the more important symptoms, which are commonly observed in hysteria, be considered, for example the nervous attacks, the paralyses, the contractures, and the anesthasias, it is found that although they have certain attributes common to each other, they as a class have nothing that distinguishes them from any other group of symptoms. As a class they are purely functional—that is, mental in origin; but symptoms similar to these and also of mental origin are found in many organic diseases. It is generally supposed that symptoms purely hysterical in origin can be provoked by purely psychological causes, and that they can appear under different forms in the same subject, and that they do not seriously affect the general nutrition or mental state of the individual affected. Though this group of symptoms may be considered characteristic of hysteria, yet they are not solely found in this disease, but are frequently present as accompanying symptoms of organic nature. The special characteristics of hysterical symptoms is their reaction to suggestion. This is true of all hysterical symptoms and is not true of the same symptoms to the same extent found in other diseases. As a result of this special quality in hysterical symptoms Babinsky has proposed the following definition: Hysteria is a psychical state which renders the individual attacked by it capable of autosuggestion. It shows itself principally by two groups of symptoms: a primary and a secondary group. The characteristic of the primary group is that it can be reproduced by suggestion with great exactness, and that it can be made to disappear by the influence of

persuasion alone. The characteristic of the secondary group is their strict subordination to the primary symptoms.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Ureteral Anastomosis — Report of a Successful Case.—TURNER (*Annals Surgery*, December, 1901).—While performing vaginal hysterectomy for prolapse of uterus and bladder, Turner divided the left ureter two inches from the bladder. Owing to the elongation of the ureters, due to the procidentia, he had room to work through the vagina in doing the anastomosis, but while attempting the Van Hook method the proximal end of the ureter was accidentally split for half an inch, thereby increasing the interval between the ends, and augmenting the difficulty of uniting them. As the upper segment was already split, he reversed Robinson's method, and implanted the lower into the upper segment by passing sutures through the lower, thence through the upper segment, pulling the former into the latter, and tying the traction sutures. After reinforcing the joint with five sutures, he covered it with peritoneum. The vagina was packed with gauze. Eight hours after the operation the catheter obtained eight ounces of urine. The patient made an uninterrupted recovery, and was well one year afterwards.

Contribution to the Surgery of True Cystic Kidney.—NEMACK (*Annals Surgery*, December, 1901) reports the following case: A woman, forty-three years old, of neurasthenic disposition, upon examination showed a smooth, kidney-shaped tumor below the liver, freely movable, slightly tender, and a trifle larger than a normal kidney. The patient was unaware of the condition, but admitted irregularity of urination, with a dull ache in the right side. Three months later she developed chills and fever, accompanied by pain below the liver, suggesting a septic process. The tumor was twice its former size, and nearly transverse in the abdomen. On its surface were several elevations of nearly walnut size. Four days later, through an exploratory incision, the other kidney appeared to be normal. The left kidney was then removed. Five hours after the operation two ounces of clear urine, specific gravity 1.010, was obtained. The next day thirteen ounces was voided spontaneously; twenty-six hours later vomiting and decided oliguria appeared, and the patient died in coma sixty-two hours after the operation. No post-mortem. The author suggests that the cause of death was a condition of the other kidney similar to the one removed, and that if a nephorrhophy had been done at the time of the first examination, the left kidney would probably have escaped disease.

As nephrectomy in these cases is a procedure of very doubtful value, what shall take its place? The author suggests removing the twist, splitting the kidney to the pelvis, stitching the organ in position, and draining with gauze.

[It is to be regretted that microscopic examination of the kidney removed is not reported, as this case is probably cysto-sarcomatous.—Ed.]

Congenital Absence of the Abdominal Muscles, With Distended and Hypertrophied Urinary Bladder.—OSLER (*Bulletin Johns Hopkins Hosp.*, November, 1901).—Two similar cases only can be found in literature: one reported by Parker, and one by Guthrie.

Parker's case (*Clin. Soc. Trans.*, vol. xxviii., 1895), was a newly born infant in which the abdominal wall was as thin as parchment. The baby died not

long after birth. There was enormous hypertrophy of the bladder, which was situated wholly within the abdominal cavity. There was no obstruction anywhere in the urethra or prepuce. The opening of the ureters into the bladder was quite free. The ureters and pelvis of the kidneys were greatly dilated and hypertrophied.

(Guthrie's case (Pathological Soc., London, Trans., vol. xlvii.) was of a male infant, aged nine weeks. Between the pubes and the umbilical scar there was a long, smooth, elastic tumor. The abdominal walls were excessively thin and loose. The ureters could be felt as dilated and convoluted tubes on each side, so much resembling distended intestinal coils that they were mistaken for the latter during life. The child died within ten weeks. The bladder reached as high as the navel, and its walls were over one-quarter of an inch thick. The ureters were dilated to the size of the small intestines, and were tortuous. No stricture of the urethra, no phimosis. The kidney pelvis were dilated, but the kidneys were not enlarged. The bladder was closely adherent to the umbilical scar.

The author's case: The child was well until the second summer, when gastric attacks of nausea and vomiting began. From the history of the case, in some of the attacks the chief trouble was with the urine. The spells lasted four or five weeks at a time. The present crisis showed pains in the abdomen and burning upon urination. The very weak, anemic, poorly nourished child complained of pain in the hypogastric and lower umbilical regions; passed urine fifteen or twenty times daily, and had a temperature ranging between 99° and 102°. There was remarkable fullness in the hypogastric and lower umbilical regions, with an ovoid mass corresponding to a dilated bladder. In the recumbent position the belly flattened out in front and extended in the flanks. Coils of intestines could be seen in peristalsis. There was extreme relaxation of the abdominal walls and the organs underneath could be easily palpated. It was possible to feel the whole extent of the liver. The bladder reached almost to the navel. He has cryptorchidismus.

Prostatic Calculus Removed Through Perineal Section.—LEVISON (*Boston Med. and Surgical Journal*, December 5, 1901).—There are two kinds of prostatic calculi; essential and adventitious. By the essential is understood the concrement which develops spontaneously within the prostatic tissue and having no connection with the urethra. The adventitious form is frequently the result of some substance (uric acid crystals or vesical calculus) dropping into the prostatic sinus and becoming encysted. This body, acting as a nucleus and increasing in size, eventually breaks through the urethral wall. Most old and even young prostates contain minute prostatic concretions corresponding to the corpora amylacea. Prostatic calculi of adventitious origin are not at all frequent. Their chemical composition differs materially from the essential variety in being made up of the urinary salts about a nucleus of some kind. The essential form most often remains unrecognized, and unless it encroaches upon the *pars prostatica urethrae* it is only of pathological interest.

In the case reported by the author the first impression was of stone, but as the examination was continued he became less positive about it. The patient was thirty-five years of age, with a history of cystitis of gonorrheal origin, seven years' standing, and complained much of pain in the perineum, vesical tenesmus, frequent urination, pain in the back, etc. Quantities of pus were noted in the urine. The cystoscope showed a prostate as usually seen in old men. Rectal examination revealed an enlarged prostate with indurated lateral lobes. The middle lobe conveyed an impression as if of stone lying imbedded in prostatic tissue.

Diagnosis was made of concretion in the middle lobe with inflammatory enlargement of the lateral lobes. A horseshoe incision was made in the perineum

and careful dissection between the rectum and bladder brought the prostate nicely into view. The calculus was removed through an incision into the gland. A small part of the surrounding infiltrated tissue was enucleated. The wound was closed with gauze drainage, convalescence was practically uninterrupted, and the pain and tenderness disappeared. The calculus weighed 6.0 gm., and should be classed in the essential variety.

The Bottini Operation.—HORWITZ (*Phil. Med. Jour.*, November 30, 1901) considers the present status of the Bottini operation based upon 888 operations by 48 operators.

The results may be summarized as follows:

Improved and cured	84.3 per cent.
Unimproved	10 per cent.
Deaths	5.7 per cent.

Of 453 cases of which there is accurate information, the percentage of cures was 47.2 per cent.

The fact that out of the 888 unselected cases 715 of the number were either cured or improved, the mortality being 5.7 per cent., confirms the statement that the results of these operations have been to place this procedure upon a firm basis.

The Indications for Operation in Calculus Nephritis and Ureteritis.—LEONARD (*Jour. Am. Med. Assn.*, November 30, 1901).—More than half the calculi that originate in the kidney pass into the ureter before they occasion sufficient symptoms to make their presence known. While it is probable that many small calculi remain in the urinary tract throughout life without causing notable symptoms or impairing the kidneys, on the other hand, they may entirely destroy the function of one kidney without the recognition of the fact by the patient.

It is the Roentgen method that has shown the greater frequency of ureteral calculi, and that has enabled us to adopt a more conservative way of dealing with them. For by this method the calculus and kidney can be watched, and when damage is impending, operative procedures can be employed. It is as reliable for positive as negative results. If the skiagraph shows the kidney to be hydro-nephrotic or pyonephrotic, and tenderness can be elicited over the organ, they make more probable the subsequent passage of the calculus. It is an indication of the functional activity of the kidney and of a *vis-a-tergo*.

The employment of all exploratory instruments in the male, when there is no infection, is to be avoided. The segregator, the cystoscope, the vesical sound and the ureteral catheter are all valuable instruments for diagnosis, but their use in aseptic cases is a question still *sub judice*.

In the female the indications for the Roentgen method are not quite so definite, as the ureters are more accessible, and comparatively simple operations often hasten the passage of the calculi; also, it may detect phleboliths in the venous plexus of the broad ligaments, in the veins of the vaginal wall, and other pelvic veins. Although the phleboliths can generally be differentiated, at times it is difficult. Thus, the wax-tipped catheter, hydronephrosis, pyonephrosis, or enlarged kidney may lead us to the diagnosis of calculus.

The Roentgen method has led to modifications in the operative procedures. The location of the calculus being clearly shown, it is possible to cut directly down upon it, thus avoiding exploratory incisions into the kidney substance for other stones.

This method shows not only the location, but the number of calculi, so that we are sure when we have removed all of them. It also shows the absence of calculi in the other kidney, giving us valuable information should it be necessary to remove one kidney. A stone may be removed from the ureter directly

either transperitoneally, retroperitoneally, transeystic with suprapubic cystotomy, or the ureter may be opened through the vaginal vault.

In cases of sudden anuria, the necessity for immediate operation is urgent, and the wrong kidney must not be selected. The symptoms are too often misleading. It is here that the value of the Roentgen-ray is readily appreciated, the calculus is detected and the operation directed accordingly. If the outlines of the kidneys can be shown, the enlargement of one or the other will guide the operator to which kidney must be operated upon first.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Report of a Case of Idiopathic Multiple Sarcoma of the Skin.—KOEHLER and JOHNSTON (*Journal of Cutaneous and Genito-Urinary Diseases*, January, 1902).—The writers state that cases of multiple cutaneous sarcomata are rare, but in spite of their infrequency quite a number of clinically different varieties have been described. Histologically, they show no great diversity, and they may be divided into spindle-celled (fuso-cellular) and round-celled (globo-cellular). Unna also described a giant cell sarcoma. Unna, in his book on the "Histopathology of the Skin," gives the following five varieties of multiple sarcomata: Sarcoma multiplex cutaneum durum album, sarcoma multiplex cutaneum durum pigmentosum, sarcoma multiplex cutaneum molle, sarcoma multiplex cutaneum gummatodes, arosarcoma multiplex cutaneum teleangiectodes.

The case described by the writers resembles the description of the first variety closely, even to the absence of pigment. Unna regards the fuso-cellular variety of sarcoma as the main type of the cutis proper. The patient was a man of fifty years; noticed the eruption in 1899 for the first time, appearing on the lower extremities and extending over the trunk and face. The nodules ulcerated at times, although the tendency to this seemed very slight. Arsenic treatment did not give much relief. Microscopic examination of the tumors showed them to be somewhat different from the usual run of skin sarcomata. The process began in the lower reticular layer and upper hypoderm. It did not invade the papillary layer, and seemed limited by the lower level of the coil-glands beneath. There was a striking absence of pigment in the growth, and there was also no reactive inflammation of vessel dilatation. In the peripheral portions there was a close packing of spindle cells. There are but few patent blood vessels in the growth, but in spite of this there was no necrosis. The tumor, in short, was a small spindle-cell sarcoma, with which occurred such endothelial proliferation as to strangle the sarcoma element in the older portion. It was free of pigment, hemorrhagic or metabolic, and belonged to the class of sarcoids, constituting a new type, but nearly allied to multiple hemorrhagic sarcoma.

An Extraordinary Case of Quinine Susceptibility.—STELWAGON (*Journal of Cutaneous and Genito-Urinary Diseases*, January, 1902).—Cases of eruptive phenomena from the ingestion of quinine preparations are common enough in literature and fairly well known, and therefore the publication of new instances is probably only justified by some unusual feature, or for the purpose of calling attention to the possible confusion of some of these rashes with the exanthemata. The case described by the writer is especially striking on account of the smallness of the dose necessary, the many ways in which the drug surreptitiously, so to speak, gained access, and the uncomfortable results which followed. The patient, a

gentleman of middle age, healthy, has had something like twenty-five attacks of scarlatiniform erythema, followed by branny and lamellar and sheet-like desquamation, with more or less accompanying itching, and running a course of several weeks.

The history of these attacks is interesting, as it was noted that on every occasion that the patient had imbibed quinine in any form he had an attack of the eruption. He took small doses of quinine once for malaise. Straightway an attack of the eruption occurred. When the eruption was over he took a tonic containing quinine to build him up, whereupon another attack of the eruption recurred. And so on, every time he took quinine, calisaya or any of its derivatives he suffered with this skin eruption. The use of a tooth-wash containing an infinitesimal amount of quinine superinduced an attack, as did the use of a quinine lotion on the hair.

The patient's life has been made miserable on account of his great susceptibility to quinine. He stands in mortal dread every time he consults a strange physician, fearing that he will not properly consider the question of susceptibility to quinine. Even when he has no fears on account of good health he is in danger of using a tooth-powder or wash containing quinine.

Strange to say, the patient stated that but a few minutes elapse after he has taken the drug before he feels a flush go over the entire surface of the body, and he always knows at once that the mischief has been done. His nails have always been unaffected.

Circumscribed Lymphangioma.—A. FALLER (*American Medicine*, December 28, 1901).—A. Faller gives a brief description of a case of circumscribed lymphangioma including the appearance of the pathologic lesion under the microscope. The author refers to some of the prevalent views in regard to the etiology of this affection, and also mentions the usual therapeutic measures employed. Reference is made to the literature upon the subject.

The individual suffering from the disease is described as an idiot, male, about thirty years of age, well nourished, muscular. He has complete anesthesia of the skin and has a large scar on the right side of the scalp. Under this scar the bone crepitates on pressure. No history could be obtained beyond the statement of the keepers of the patient that he has had the skin affection for many years. The lesion consists of an area extending several inches over the left scapular region covered with vesicles varying in size from a pin's head to a pea. The vesicles in the central portions are verrucous-like and dark red, those towards the periphery being clear and tense; the latter are more numerous than the former. Some of the clear vesicles also show telangiectatic capillaries, while others show that the blood has extravasated and settled in the most dependent parts. Pressure reduces the vesicles to the level of the surrounding skin. In some places the lesion resembles herpes zoster and in other places hydrocystoma. Under the microscope the epidermis appears normal; while the papillary layer presents the characteristic lesions. The upper part of the corium is everywhere occupied by dilated lymph vessels, communicating freely with lymph spaces. The lymph vessels and spaces are lined with endothelium resembling that of normal vessels. The capillaries are also dilated and ruptured in some places. The middle layer of the cutis is not much involved, but the deeper layer shows angio-cavernous spaces near the sweat glands. The sweat glands also show some degree of hyperplasia. The hair and sebaceous glands are not much involved.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

A New Method of Treating Hay Fever and Kindred Affections.—EMANUEL FINK (*Deutsche Medicinische Wochenschrift*, November 14, 1901) states that all affections of the nose coming under the head of coryza nervosa, as hay fever, hydrorrhea nasalis, etc., are due to an affection of the trigeminus involving principally the secretory fibers of the accessory cavities of the nose, the antrum of Highmore being the main seat of the trouble. The author claims to have been able to effect a cure in eleven cases treated by dusting aristol into the antrum by means of a small cannula introduced through its natural opening in the nose.

A brief history of five of the cases so treated is given, viz.:

CASE I.—O. S., aged sixteen years, clerk; was first seen on June 12, 1898. He had an attack of hay fever the year before, which began in June and lasted until the latter part of July. On the 2d of June, 1898, the second attack came on, but was very mild at first, but by the fourth was quite severe. After four insufflations of aristol the attacks ceased.

CASE II.—K. J., student, aged twenty-three. Has had hay fever during the past twelve years. He had been treated in various ways without avail. The attacks were typical—began in June and lasted until the latter part of July. He complained first of a tickling sensation of the palate, then would sneeze fifty or sixty times, followed by a burning sensation, tearing of eyes, and a profuse discharge from the nose lasting for hours, and, if he remained out-of-doors, the attacks would be accompanied by asthmatic symptoms. Marked improvement followed the first insufflation of aristol, and after six insufflations the patient was discharged, on June 20th, as cured.

CASE III.—Had attacks of coryza nervosa at irregular intervals, which began every third or fourth day, in the morning, with sneezing, and patient would sneeze as often as a hundred times. After the first insufflation the attacks did not recur for six weeks, and the interval grew longer following subsequent insufflations. During the past year there has been no recurrence.

CASE IV.—Man, aged twenty-five; has had coryza nervosa many years. Attacks came on every few days. Secretion only from right side. Marked improvement followed the first insufflation, which was given on October 5, 1899. On the second of November had another attack, and insufflations were then made several times with a three days' interval between each. The patient was seen again on May 16, 1900. He had no attack up to that time.

CASE V.—Seamstress, aged eighteen, has had hydrorrhea nasalis since her ninth year. The attacks always began with severe headache, weakness and nausea, followed by a paroxysm of sneezing, after which there was a profuse watery discharge from the nose. These attacks last for hours and sometimes days, and usually come on every two or three days. Once only did the attack remain away for four weeks, when she made a visit to "Vierlandin," but on her return the attack came on the same as before. After one insufflation of aristol the patient was cured.

Similar results were obtained in six other cases treated by this method. In only one other case the result was unsatisfactory, but this one was complicated by an empyema of the antrum of Highmore.

In conclusion he advises that the existing neurasthenia should also receive proper attention.

Sinusitis Nasi and Otitis Media Following Influenza.—INGERSOLL (*Cleveland Journal of Medicine*, October, 1901) notes the frequent involvement of the maxillary sinuses in influenza. The ethmoid cells are less often affected, and the sphenoidal cavities rarely. In those cases the pain is greater than in an ordinary sinusitis, and if the natural openings of the cavities become obstructed, it is excruciating. When the ethmoid or sphenoid cells are involved the danger of brain infection is great.

Transillumination of the cavities has not proved reliable, but a radiograph of the superior maxillary have usually shown an infected antrum to be much darker than a normal one. A maxillary empyema may be secondary to a frontal or ethmoidal sinusitis.

The treatment of acute sinusitis consists of rest, hot or cold applications externally, and the application of the solution of suprarenal gland to the turbinal tissues once or twice daily. If the cavity or cavities do not recover within ten days or two weeks under such treatment, a permanent opening should be made into the antrum, in antral cases, and the cavity washed daily with a normal salt solution. Then the vapor of camphor, menthol and boric acid, each ten grains, in an ounce of alboline, is blown through the antrum for a few minutes.

If they do not recover in three months, a larger opening should be made and the antrum curetted.

In chronic frontal sinusitis, the anterior end of the middle turbinate must be removed and the infundibulum enlarged, if necessary, to give free drainage and to permit irrigation.

In chronic ethmoiditis and sphenoiditis enough of the middle turbinate must be removed to permit a thorough curetting of these cavities.

Otitis media is a frequent complication of influenza. Sometimes localized hemorrhages are to be seen in the membrana tympani. Local application of cold and free purgation at the outset may prevent suppuration. A leech may be used if this does not relieve. Paracentesis should be done, if fluid can be seen. After paracentesis the secretion should be removed with small pledgets of cotton and the ear dusted (not packed) with some antiseptic powder.

Syphilis of the Nose and Throat.—E. B. GLEASON (*International Medical Magazine*, October, 1901).—The primary lesion of syphilis is rarely found in the nose. Secondary lesions of the nasal mucous membrane are analogous to and often coincide with those appearing on the skin. They vary from a mere erythema of the mucous membrane to intense hyperemia and swelling, with the presence of shallow ulcers, secreting an offensive muco-pus. During the tertiary period nasal gummata are by no means rare. They appear as irregular nodulated swellings, distending the mucous membrane of any part of the nose. A nasal gumma may be absorbed, leaving, in some instances, a characteristic cicatricial contraction, or it may break down and produce an ulcer, before which the cartilages and even the bony structure may melt away like wax as the ulceration rapidly extends, thus producing in a marvelously short time the most hideous deformity. In aggravated cases the soft parts may also be involved in the process, until finally the anterior nares are represented merely by an irregular hole in the face.

Hereditary syphilis pursues the same course as the tertiary form of the acquired disease.

In primary syphilis of the pharynx, examination shows a whitish abrasion, soon followed by swelling of the glands about the angle of the jaw. Secondary lesions may present either the form of mucous patches or erythema, characterized by a diffuse redness of the entire fauces, or, more commonly in the milder attacks, by a broad red line extending upward upon each of the anterior pillars, and ending abruptly and symmetrically at the root of the uvula. These red lines are almost pathognomonic of syphilis, and persist for a long time after other

secondary lesions have disappeared. In secondary syphilis the larynx almost always becomes involved, so that the voice is hoarse, and there is present a short cough of a peculiar metallic character. Mucous patches and erythematous patches in the throat are usually symmetrical. Tertiary lesions do not so frequently present this symmetry. Gummata more frequently involve the tonsils or soft palate than any other part of the throat. When an ulcerating gumma is situated on the post wall of the pharynx, the cervical vertebra, or even the cervical cord itself, may finally become involved, and a fatal issue result. In such cases care must be taken to prevent union of the soft palate and uvula to the pharyngeal wall when the ulceration involves the post surface of the palate.

Syphilis of the larynx most frequently occurs as a manifestation of the tertiary period, three to thirty years after infection. As a manifestation of secondary syphilis, laryngeal symptoms may occur within a few weeks, or as late as two or three years after primary infection.

In secondary syphilis, the laryngeal lesions may consist of a mere hyperemia, giving rise to the symptoms of simple laryngitis. Ulcerations may also be present, and are usually symmetric. Syphilitic warts or condylomata are also frequently found in the larynx during the secondary stage of syphilis.

Tertiary manifestations consist of gummata, which may break down and cause deep ulcerations, with perichondrosis and necrosis of the cartilages; while stenosis may result from cicatricial contraction after the healing of syphilitic ulcers.

In syphilis of the nose and throat constitutional treatment is of primary importance. The primary and secondary lesions are probably best treated by the internal administration of protiodide of mercury in pill form. Any ulceration on the mucous membrane should be touched every other day with the acid nitrate of mercury until they are healed. If in the nose, the ulcerations may be dusted with calomel. In tertiary syphilis the "mixed treatment" answers a very useful purpose. One, two or three teaspoonfuls of the following mixture (℞ Hydrarg. bichlor., gr. j; potass. iodid., 3 ij; aqua, 3 iij) may be given three or four times daily. Mercury may also be given hypodermically. From eight to twenty minims of a solution of bichloride, three grains to the ounce of water, should be injected into the cellular tissue of the back every day, or at less frequent intervals. A few injections are ordinarily required to limit the spreading of a gummatus ulcer, which speedily assumes a more healthy appearance. In cases where gummata are so situated as to cause obstruction to the nasal respiration, pain and intense headache, from pressure, the action of medicine is too slow and operative procedures must be resorted to. A gumma may be removed from the turbinate bone with the snare, or scraped from the septum with a large nasal curette.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

Ocular Lesions of Small-Pox.—E. JACKSON (*Denver Med. Times*, December, 1901).—Small-pox is at present responsible for 1.41 per cent. (United States) to 12 per cent. (Russia) of all blindness. Corneal lesions constitute the principal ocular complications. The severest manifestations occur in persons who have never been successfully vaccinated.

A common form is a greyish infiltration of the cornea, coming on with the subsidence of the cutaneous eruption, perhaps six weeks after the outbreak of the disease. The corneal surface is roughened, but there may be no actual ulcera-

tion. The lids are hyperemic and swollen; photophobia is intense. Recovery, usually with some permanent cicatrization of corneal tissue, may be expected under atropin and appropriate astringents.

A history of transient blindness during the attack, where subsequent inspection fails to reveal any damage to the eyes, is to be explained as due to intense swelling of the lids or agglutination by dried discharge. A variolous pustule of the cornea, occurring in the full bloom of the efflorescence, is extremely rare; the unfortunate cases of perforation leading to total destruction of the cornea are due to deep ulceration beginning after the twelfth day.

In view of the fact that the outcome is generally favorable, even with indifferent treatment, statistics of results obtained with so-called "specific" treatment—instillations of methylene blue 1-500 and subconjunctival injections of corrosive sublimate—are somewhat futile.

The Examination of the Eyes in Relation to Life Expectance.—DE LANTSHEERE (*Med. Examiner*, December, 1901) insists that ophthalmology should play an important rôle in the "universal medical formulary" of life insurance examinations. Systematic examination of the eyes may lead to the discovery of antecedent diseases concealed by the applicant, may help to determine the "risks subordinated to the physical condition," and, in certain affections, may have a direct bearing on prognosis upon the eventual duration of life.

Affections of the lids, conjunctiva and lachrymal sack may indicate scrofulosis, rachitism, and certain intoxications. Corneal opacities suggest infectious disease: evidences of parenchymatous keratitis, syphilis or tuberculosis. Syphilis, tuberculosis, diabetes, gonorrhea, rheumatism and gout are etiologic factors in iritis, traces of which are usually discoverable in synechiae and pigment flecks on the lens. Brain affections of syphilitic origin may be evinced by a mydriasis, a myosis, or abnormalities of pupillary reaction to light and accommodation. Ocular paralyses occur in tabes, bulbar paralysis, sclerosis, apoplexies: in certain infectious diseases—*e. g.*, syphilis, diphtheria, and may accompany lead, tobacco, alcohol and other intoxications.

Diminution of visual acuity not due to uncorrected refractive error or anomaly of accommodation, indicates lesion of the optic nervous apparatus. Optic atrophy and glaucoma give rise to peripheral contraction of the visual field. Choroiditis and retinitis to eccentric and disseminated scotomata. Neuritis and macula lesions to central scotomata. Hemianopsia is indicative of cerebral hemorrhage or tumor, uremia, lead poisoning.

Diabetes should be suspected in the presence of lenticular opacity. Atheroma is often accompanied by clouding of the vitreous. Syphilis, tuberculosis, brain tumor, and rheumatism may be causative factors in a neuritis or neuro-retinitis. Tabes and general paralysis are often first suspected on the appearance of an optic atrophy.

An albuminuric or diabetic may, by subjecting himself to a rigid diet, appear before the examiner with a urine free from albumin or sugar; in such cases an examination of the fundus may reveal the true state of affairs. With respect to prognosis, it may be said that a patient with albuminuric retinitis is in the gravest danger, the great majority dying within a year; fifty per cent. of diabetics with retinitis succumb within two years. Syphilitic iritis, irido-choroiditis, retinitis and optic neuritis indicate a profound infection of the organism, with the probability of the occurrence of cerebral accidents.

Frost-Bite of the Cornea.—MEIERHOFF (*N. Y. Med. Jour.*, November 30, 1901).—Meierhoff observed two cases of clouding of the cornea in young babies after the prolonged use of ice-cold pledgets. The suspected specific ophthalmia proved in each case to be merely a mild catarrh. The damage is thought to have been wrought by interference with the nutrition of the cornea. Dry, warm applications effected a cure.

BOOK REVIEWS.

THE PATHOLOGY AND TREATMENT OF SEXUAL IMPOTENCE. By VICTOR G. VECKI, M. D. Third edition, revised and enlarged. 12mo, 329 pages. Philadelphia and London: W. B. Saunders & Company. 1901. Cloth, \$2.00, net.

The popularity of this work is shown by the fact that the first edition was exhausted in less than two years. This, the second edition, has been much improved by additional matter, especially in the way of treatment. The author discusses fully the etiology and treatment of those prematurely impotent, a large part of the book being devoted to the latter.

The function of introitus is regarded as so important to the welfare of man that the author recommends a unique mechanical device to support an otherwise weak and flaccid organ.

The work is well written, and is a careful and exhaustive treatise on the subject.

THE PHYSICIAN'S POCKET ACCOUNT BOOK. By J. J. TAYLOR, M. D. Consisting of a manilla-bound book of 208 pages and a leather case. Price, \$1.00 complete. Subsequent books to fill the case 40 cents each, or three for \$1.00. Published by the Medical Council, Twelfth and Walnut streets, Philadelphia.

This account book offers one advantages in that an account as entered is in ledger form, and no posting or transfer is necessary. A unique and valuable feature is a due-bill form at bottom of each page. We believe this to be the best pocket account book on the market.

A TEXT-BOOK OF SURGERY. By HERMANN TILLMANNS, Professor in the University of Leipsig. Translated from the seventh general edition by BENJAMIN J. TILTON, M. D., Instructor in Surgery, Cornell University, and JOHN ROGERS, M. D., Instructor in Surgery, Cornell University. Edited by LEWIS A. STIMSON, M. D., Professor of Surgery, Cornell University. Volume I., The Principles of Surgery and Surgical Pathology. With 516 illustrations. New York: D. Appleton and Company. 1901.

Tillmanns has for years held a leading place among those who write text-books for the students of Germany. With the single exception of Koenig's still larger work, no other is used to the same extent, and none, not even Koenig's, ranks with Tillmanns' in point of convenient arrangement and concise diction, so essential to the student's best interest. The present volume is handsome in appearance, contains eight hundred and fifty-one pages, and is illustrated profusely, many of the cuts being original. Indeed, it is refreshing to note that the author has cast aside many of the old stock pictures which have been copied from one book on surgery to another until novelty in this line had commenced to seem an impossibility. The chapter on wound-healing, together with its plates on the formation of new capillaries, cannot be too highly praised. Since the appearance of the first English edition of this book, it has enjoyed a measure of success sufficient to warrant the present edition, which is in reality a revision, made necessary by changes in the German original, chiefly in the departments of pathology and bacteriology. One cannot too highly commend the custom, copied from the Germans and the French, of dividing surgical text-books into separate volumes on principles and practice. No student is competent to take up understandingly the diseases of the special regions until he has mastered the

general fundaments of disease. How, for example, is a man to comprehend the treatment of inflammation of the appendix, until he understands inflammation in general? Tillmanns carries out this idea in his work. The volume before us for review contains the essentials of surgical pathology and bacteriology, general facts on diseases and injuries of the tissues with their treatment, tumors, general surgical technique and bandaging. As regards the illustrations of the surgeon's paraphernalia, we get from the work many of the German instrument-maker's ideas, and thus enlarge our field of view.

A MANUAL OF SURGICAL TREATMENT. By W. WATSON CHEYNE, M. B., F. R. C. S., F. R. S., Professor of Surgery in King's College, London; Surgeon to King's College Hospital, etc., and F. F. BURGHARD, M. D. and M. S. (Lond.), F. R. C. S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital, etc. In seven imperial octavo volumes, with illustrations. Volume V., 482 pages with 145 illustrations. Cloth, \$5.00, net. Lea Brothers & Co., Philadelphia and New York. 1901.

With this volume the exhaustive English work nears its completion. As a matter of course the present number is similar in style and appearance to its predecessors, which have been so widely and favorably commented upon. There has, in the tone of the special volumes, been a decided improvement over those earlier chapters which dealt with the general principles of asepsis etc.; the criticisms which were justly hurled at them by many reviewers, can by no means be said to apply to the volume at hand. Number V. will be of more aid to the general practitioner than have any of the others; the authors have, as it happens, taken up here many of the pathological conditions which the average doctor is called upon to meet, and at the same time many of the surgical procedures detailed in its chapters are of the scope of his endeavors. Thus the work being now essentially of treatment, it will readily be seen how well it must subserve the purpose of the busy man who has during his working hours little time for considerations other than those of therapeutical nature. Volume V. deals specifically with the congenital affections, inflammations, tumors, injuries of and foreign bodies in the nose, mouth, ear, pharynx, larynx, lips, face, scalp, skull, etc., and the entire book of 482 pages devoted to these matters in a way which is sufficiently exhaustive for all practical purposes. The illustrations, while not exactly samples of the highest that has been accomplished in the engraver's line, serve still to elucidate the subject-matter in a satisfactory manner.

A TREATISE ON SURGERY BY AMERICAN AUTHORS.—For Students and Practitioners of Medicine and Surgery. Edited by ROSWELL PARK, M. D., Professor of Surgery in the University of Buffalo, New York. New (3d) edition in one royal octavo volume of 1350 pages with 692 engravings and 64 full-page plates in colors and monochrome. Cloth, \$7.00, net; leather, \$8.00, net. Lea Brothers & Co., Philadelphia and New York.

This handsome volume is now appearing in the author's third edition in five years; a certain evidence that the work has not only stood the test of time, but at the same time won for itself the unqualified approval of the medical public. We have as matter of course plenty of men who are able exponents of the *art* of surgery, but as much cannot be said for the *science* of surgery; indeed, Park may be justly said to be one of the few whose work in this direction has distinguished him.

The book is intended to meet the wants of the student, the general practitioner, and the specialist as well. For the different subjects, Park has chosen authors who are known as masters in their respective fields, most of the general surgical pathology having been written by Park himself. The chapters on in-

jury and repair are contributed by Nancrede, and his name is a sufficient guarantee for their excellence. The two chapters on fractures and dislocations were from the pen of the late Henry H. Mudd, of St. Louis, making the work of especial interest to physicians of this city. Richardson wrote the chapters on the abdomen, Matas that on amputations, Lovett that on orthopedic surgery, and other surgeons almost if not quite equally well known, those on the other special subjects. The illustrations are certainly profuse both in quantity and quality; the sixty-four colored cuts are as fine examples of the art as one could wish to see. The size of the work is imposing, the style of binding is attractive, and the quality of workmanship employed as well as the texture of the paper, leave nothing to be desired. The fact that the whole is contained in one volume saves a great amount of time which would be spent in referring from one number to another; a matter which will be appreciated by the busy man. When one considers that he gets a book on general surgery as well as one on special surgery, the price does not seem great.

A GUIDE TO THE INSTRUMENTS AND APPLIANCES REQUIRED IN VARIOUS OPERATIONS.

By A. W. MAYO ROBSON. Second edition. Two shillings and sixpence. Cassell & Company, limited, London, Paris, New York and Melbourne. 1900.

This little work from the hand of a master is of value to one who leaves all the preparations for an operation to a nurse or assistant. It is made up of lists of the various outfits required for the performances in the realm of surgery. It has sixty-two pages, is neatly printed and bound, and is of very moderate price.

THE PHYSICIAN'S VISITING LIST FOR 1902. Fifty-first year of its publication. Philadelphia: P. Blakiston's Son & Co.

This handy little book will suffice for twenty-five patients per day or week, and sells for the low price of \$1.00 per copy. Each entry is ruled for the following items: name, date, amount paid, ledger page, and special memoranda. In fact, it furnishes a convenient form for keeping the doctor's accounts.

A LABORATORY HAND-BOOK OF PHYSIOLOGIC CHEMISTRY AND URINE EXAMINATION.

By CHARLES G. L. WOLF, M. D., Instructor in Physiologic Chemistry, Cornell University Medical College, New York. 12mo volume of 190 pages, fully illustrated. Philadelphia and London: W. B. Saunders & Company. 1901. Cloth, \$1.25, net.

This book, which is primarily intended for students and practitioners of medicine, is admirably adapted for the purpose. The text is clear and concise, and only such tests are given as are generally needed, and can be easily carried out by the practitioner. It is to books of this character that we must look as an educator for accurate diagnosis. It is carefully printed.

FIRST AID TO THE INJURED AND SICK. By F. J. WARWICK, B. A., M. B. Cantab.,

Associate of King's College, London; Surgeon-Captain, Volunteer Medical Staff Corps, London Companies, etc., and A. C. TUNSTALL, M. D., F. R. C. S. Ed., Surgeon-Captain Commanding the East London Volunteer Brigade Bearer Company; Surgeon to the French Hospital and to the Children's Home Hospital, etc. 16mo volume of 232 pages and nearly 200 illustrations. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, \$1.00, net.

The small volume which is here reviewed has as its purpose the instruction of members of the laity who may be called upon to take care of a sick or injured

individual until the doctor comes. There can be no doubt of the value of such instruction; intelligent "first aid" can do an immense amount to supplement the professional man's later work, while the opposite kind can result in the patient's undoing. The book at hand is so simply written as to be intelligible and consequently useful to the average individual; the little work is not for the general laity alone, but may be used with good effect by nurses, and the employees of factories, the running of which is attended with especial and peculiar dangers to its operatives.

A TEXT-BOOK ON DISEASES OF THE NOSE, THROAT AND EAR. By CHARLES H. BURNETT, M. D., E. FLETCHER INGALS, M. D., and JAMES E. NEWCOMB, M. D. With numerous illustrations. J. B. Lippincott Company, Philadelphia and London. Price, \$5.00.

This work is divided into three parts. Each part is written by a practical teacher, and presented in a concise but thorough manner. It is indeed a satisfactory work for the practitioner as well as the student.

PROGRESSIVE MEDICINE, VOL. IV., 1901. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 400 pages, 13 illustrations. Per annum, in four cloth-bound volumes, \$10.00. Lea Brothers & Co., Philadelphia and New York.

It is nowadays generally recognized that *Progressive Medicine* brings the most complete and consecutive synopsis of medical progress in every special field. The latest volume gives additional justification for this statement. It contains the following reports: Diseases of the digestive tract and allied organs, the liver, pancreas and peritoneum, by Max Einhorn, M. D. Genito-urinary diseases, by William T. Belfield, M. D. Anesthetics, fractures, dislocations, amputations, surgery of the extremities, and orthopedics, by Joseph C. Bloodgood, M. D. Diseases of the kidneys, by John Rose Bradford, M. D. Physiology, by Albert B. Brubaker, M. D. Hygiene by Henry B. Baker, M. D. Practical therapeutics referendum, by E. Q. Thornton, M. D.

Special attention may be called to Bloodgood's article on anesthetics, which is by no means a mere review, but a most interesting monograph on the modern teachings of anesthesia.

AN AMERICAN TEXT-BOOK OF PATHOLOGY. Edited by LUDVIG HEKTOEN, M. D., Professor of Pathology, Rush Medical College, Chicago, and DAVID RIESMAN, M. D., Professor of Clinical Medicine, Philadelphia Polyclinic. Handsome imperial octavo of 1245 pages, 443 illustrations, 66 of them in colors. Philadelphia and London: W. B. Saunders & Co., 1901. Cloth, \$7.50; Sheep or Half Morocco, \$8.50, net.

This text-book of pathology certainly deserves most favorable criticism. It is a marked improvement over all other text-books of pathology which we have seen in the English language, and approaches somewhat towards what we are accustomed to find only in German books on this subject. The different divisions of pathology are well treated, and are illustrated in a most effective way. Instead of the superficial method of discussing the pathology of different diseases, the work in hand goes into all departments exhaustively enough to give the student and the practitioner a good working knowledge of the subject.

The most recent advances in pathology are taken cognizance of in this work

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ORIGINAL ARTICLES.

THE PATHOLOGY AND THE ETIOLOGY OF PROSTATIC HYPERTROPHY. SUPRAPUBIC DRAINAGE AND MYOMECTOMY OF THE PROSTATE AS METHODS OF TREATMENT AND CURE.*

BY AUGUSTUS CHARLES BERNAYS, of St. Louis, Missouri,

A. M.; M. D., HEIDELBERG; M. R. C. S., LONDON; LIFE MEMBER GERMAN SURGICAL CONGRESS; PRESIDENT OF ST. LOUIS ACADEMY OF MEDICINE; MEMBER AMERICAN MEDICAL ASSOCIATION, MISSISSIPPI VALLEY MEDICAL ASSOCIATION; CHIEF SURGEON LUTHERAN HOSPITAL; CONSULTING SURGEON TO THE CITY AND FEMALE HOSPITALS OF ST. LOUIS, ETC.

The terrible sufferings which are caused by a lasting retention of the urine, and the dangers to life which accompany it, as well as their relative frequency in old men, were well known to the physicians of olden times. Hippocrates mentions this condition, and adds that it is incurable. This opinion of Hippocrates was held by physicians for many centuries. Morgagni in his *Epistolæ de sedibus et causis morborum*, printed in 1761, first began to shake this pessimistic opinion by his researches. He showed that the ischuria and concomitant difficulties of defecation were due to enlargement of the prostate. John Hunter corroborated Morgagni's assertion, and devotes one chapter in his "Treatise on the Venereal," London, 1786, to prostatic hypertrophy. He mentions the difficulties of micturition in old men due to enlargement of the prostate, and gives some illustrations of specimens. Everard Home, in his "Practical Observations on the Treatment of the Diseases of the Prostate Gland" (London, 1811 and 1818), as well as Desault and Bonet, who were pupils and followers of John Hunter, also corroborate Morgagni's discovery of prostatic hypertrophy and its concomitant evils.

Up to the present time the etiology of prostatic hypertrophy has not been cleared up. A completely satisfactory explanation of the process has not been found. Sir Henry Thompson defined it as an "idioplastic tumor" in his lectures, which I had the great pleasure of hearing. Enlargements of organs during the middle and younger years partake largely of an inflammatory nature, or are found to be small-cell infiltrations. Knowing that old age somewhat inclines towards or favors the development of tumors, we are not surprised to find that a part of the sexual system may show a non-inflammatory enlargement at a time when this system in all its other organs and in its functions is undergoing a retrograde metamorphosis and is being more or less put to rest. However, let us remember that Sir Henry's definition is not explanatory in any sense, and leaves the etiology of our subject in the dark.

* Published synchronously with *Medical News*.

Reginald Harrison seems to think that the hypertrophy is caused by over-exertion or overwork of the organ, whose function he conceives to be aiding the bladder in the evacuation of its contents. He thinks that the main purpose of the prostate is to furnish a muscular support, "primarily to the bladder and its contents, and secondarily to the adjacent parts," and thus seems to regard enlarged prostate as a form of compensatory hypertrophy similar in its etiology to the well-understood hypertrophies of the muscular walls of the heart.

Guyon's theory is opposed to this view, he regarding the hypertrophy as due to arterio-sclerosis of the urogenital tract.

White agrees with Velpeau that in this disease we have an analogue of the fibromyoma uteri. Sir Henry Thompson also favors this view, and I also think that the myoma of the prostate is analogous to myoma uteri, and I think that it may be referred to developmental or congenital cell-nests which lie dormant in early life and are only incited to late enlargement by the incidents accompanying the functions of the genito-urinary organs in health and in disease.

Thus we must admit that the etiology of prostatic enlargement is not understood, and the speculations which we have before mentioned are only a little more respectable than those speculations which bring diet, occupation, modes of living, abstinence and indulgence, sexual habits, gout, rheumatism or gonorrhea into direct or indirect etiological relation with the disease.

In most of the diseases in which the etiology is not cleared up the pathology is also incomplete. In the disease under discussion, however, the numerous researches by pathologists and by practical surgeons have well-nigh cleared up the pathological anatomy and also added to the knowledge of the functional disturbances which we observe as the symptoms of prostatic hypertrophy.

Cancers, sarcomata, tuberculosis, echinococcus are rare diseases of the prostate which produce enlargements of the organ. Adenoma rarely occurs, but the hypertrophy of the prostate which is under discussion now is of very frequent occurrence in the aged. In an investigation which I made upon one hundred men over sixty years of age, and taken consecutively as they came before me in my work in St. Louis, Missouri, U. S. A., I made a rectal examination in each with a view to determine the size and condition of the prostate. Of this number only fifteen complained of symptoms which were undoubtedly due to hypertrophy, but there was noticeable enlargement in thirty-one cases, without any functional disturbance. These data, being based on a physical examination of the living patient, are probably not as reliable as the figures of v. Dittel and Sir Henry Thompson, who investigated cadavers. The former found twenty-two per cent., and the latter thirty-four per cent. of enlarged prostates in cadavers of aged men, the exact ages not being known in all the cases. I have twice found enlargements of the gland in the form of nodules in boys. These observations were accidentally made upon two brothers, aged seven and nine years, who had died of diphtheria, and I am of the opinion that these small interstitial myomata will be quite commonly detected if looked for by those who have opportunities of frequently examining the prostate glands of young men and boys upon the dissecting table.

Prostatic hypertrophy when microscopically examined is found to consist of an increase of the non-striated muscle cells and connective tissue which lies between the tubular glands. These latter are displaced by the hypertrophic muscle fibers, and in extreme cases are nearly absent.

We are justified in denominating the condition which we find in most cases as myomatous hypertrophy; or if the myoma assumes the shape of a tumor, we may speak of a myoma or fibromyoma of the prostate. In rare cases the enlargement depends upon a hyperplasia of the glandular structure, and then we may speak of a diffuse or circumscribed adenoma of the prostate. The cases of acute swelling of the prostate partake of an inflammatory or infectious character, and do not come under the scope of this investigation, but their existence is undeniable, although I have never had an autopsy of a case of acute prostatitis.

Hypertrophy may be found in a diffuse form, so that all parts of the organ are affected alike, and there is an even enlargement of the whole gland; or tumor-like nodules, sometimes as large as a walnut, may be found in the form of hyperplastic knots of tissue, which are plainly visible upon sections made through the organ. All parts of the organ may be hypertrophied, but there are certain parts which are favored and most frequently attacked.

Mercier was the first to show that the hypertrophy usually begins at or near the isthmus of the gland, and that it frequently there forms what we call the middle lobe, which projects into the bladder near its neck in the form of a teat. Behind this lobe the so-called recessus or *cul-de-sac*, in which the residual urine accumulates, occurs. In other cases the lateral lobes, or only one of them, may become hypertrophic.

The cause of the sufferings of prostatics, as well as the danger to which they are exposed, is the retention of urine which often occurs as a result of the hypertrophy.

Hypertrophy of the prostate does not always lead to retention of urine, and it is often the enormously large prostate of unchanged contour which does not produce essential or severe troubles. The more localized hypertrophy, affecting only one part upon one side—*asymmetric hypertrophy*, as it were—a small degree of enlargement may cause severe troubles. This takes place when such parts of the organ are affected by the growth as are in close relation to the lumen of the urethra and project into the canal or neck of the bladder as they increase in volume.

A hypertrophy of the lateral lobes may and often does compress the urethra laterally and change it into a vertical narrow slit. This slit is often one and one-half inches long, lying between the two enlarged lateral lobes. The urethra is a vertical slit, the two walls of which may be in contact with each other in some places, but are always closely approximated. When only one lateral lobe is hypertrophic, or when one lateral lobe is more enlarged than the other, the urethra is laterally displaced and pushed out of the median line.

Mercier proved that the hypertrophied teat-like middle lobe will obstruct the internal orifice of the urethra when the bladder is contracted for the purpose of micturition. He claims that an evacuation can only take place after a greater distention of the bladder by the accumulation of more urine is accomplished. But as soon as a part of the urine is discharged the valve will again become sufficient and prevent complete evacuation. Thus the residual urine is accounted for in a simple mechanical way, and we can easily understand the interruption of the stream and the tenesmus or strangury. We can understand the somewhat paradoxical phenomenon of incomplete evacuation while the patient can voluntarily pass urine.

I have the conviction that this valve-like action of the middle lobe is only possible when it is very small and thin, but that it acts more like a dam when it is broad and stiff.

There are some cases in which the internal urethral orifice projects into the lumen of the bladder. It looks much like the portio of a virginal uterus when the hypertrophic growth of the prostate has grown upwards and backwards into the bladder. In a case of this kind the urethral opening will be closed or narrowed, and will be projected into the cavity of the bladder as the muscular coats contract. The mechanics of this condition seem to be that the urine contained in the bladder will exercise an even pressure from all sides upon the cervix-like prostate, and the more pressure that is exercised by the muscular wall of the bladder upon its contents the more will the urethra be compressed and the more difficult will be the voiding of urine. In this form of hypertrophic prostate there will be nothing to hinder the introduction of the catheter and the drawing of urine if only the catheter is long enough.

In old men there is always more or less of a *cul-de-sac* at the posterior lower part of the bladder, and we can readily see how an enlarged middle lobe must help to increase the size of this excavation. According to Dittel and his assistant, Schustler,* middle lobes of the prostate without enlargement of one or both of the lateral lobes are very rare. I have never seen but one case of solitary enlargement of the middle lobe; and according to my own observation the commonest and most usual form of prostatic hypertrophy is the bilateral enlargement of the lateral lobes in a nearly symmetrical form; and when one lobe grows more than the other, the one will bulge over and cause depression in the other and the urethra will be compressed or completely closed, so that the urine cannot escape. In this condition the vesical mouth of the urethra is not the cause of the retention as much as the two opposite contiguous lateral lobes of the enlarged prostate.

The first bad effect of retention of urine, when not relieved by the catheter, is upon the walls of the bladder in a purely mechanical way by pressure of the mass of urine on the vesical wall. This, of course, causes dilatation of the bladder. The long-continued exertion of the muscular coat in trying to expel the urine will make greater demands on the muscular coat, and the constant efforts to overcome the obstacle will be responded to by a compensatory hypertrophy of the muscular layers of the bladder wall. The result will be a peculiar net-like concentric hypertrophy of the bladder, which is known as (*vessie en colonne*) trabecular bladder, and which is so often seen at autopsies of patients who have narrow urethral strictures. The intravesical pressure frequently causes diverticula and pockets to form by the bulging out of the mucosa between the muscular trabeculae.

A chronic and extreme retention of urine causes a final dilatation of the ureters and of the pelvis of the kidney, and may cause an absorption by pressure of the secreting tissues of the kidney. When the entire urinary system or canal is thus distended the valvular opening of the ureters, which is effected by their oblique entrance into the bladder, is overcome. The vesicle orifices of the ureters are found widely patulous. The dammed-up urine in the bladder, in the ureters and in the pelvis of the kidney forms an uninterrupted column of fluid in a single

* "Contributions to the Knowledge of Prostatic Hypertrophy." *Medicin. Jahrbuecher, Zeitschrift der k. k. Gesellschaft der Aertzte in Wien.* Vol. xxiv. 1867.

large receptacle which is not divided into sections or divisions by a septum or valve of any kind. It is easily understood how, under such circumstances, an incipient purulent cystitis will rapidly spread to the pelvis of the kidney and to the kidney substance, and will cause a pyelonephrosis.

The prostatic patient is usually first notified of his trouble by a difficulty in voiding urine. This difficulty grows as the hypertrophy increases. Some day a retention of the urine takes place. Symptoms of irritable bladder, frequent desire to urinate and pain, often very severe, are other concomitants. There may be backache and tension in the region of the bladder. Even when spontaneous voiding of urine is still possible, the complete evacuation of the bladder may be impaired or interrupted from a want of power in the bladder wall to contract. A part of the urine in the *cul-de-sac*, or in some pockets, may become stagnant. Now, if by means of an unclean catheter, or by the introduction of some bacteria that always inhabit the anterior urethra, as was shown by Lustgarten and Mannaberg, into the bladder the urine is decomposed, a catarrhal cystitis is soon developed. Decomposed urine causes a continual irritation and the cystitis spreads into the deeper layers of the bladder wall, and in the presence of pyogenic bacteria we soon have a suppurative or gangrenous cystitis.

The greatest danger consists in the upward progress of the infection, through the ureters to the kidneys. We often find that the infection spreads rapidly, as there is nothing to interrupt its progress from cystitis to pyelitis and nephropyelitis. Prostaties nearly all die of pyelonephritis sooner or later; the clinical picture is that of pyelonephritis and sepsis, except in some cases when both kidneys are severely affected and they die an easy death with uremic symptoms.

SUPRAPUBIC CYSTOTOMY AS A METHOD OF DRAINAGE IN THE TREATMENT OF HYPERTROPHY OF THE PROSTATE.

Suprapubic cystotomy is an operation which finds its application in (1) stone in the bladder; (2) tumors and growths; (3) hypertrophy of the prostate; (4) foreign bodies; (5) exploration of the bladder; (6) drainage of the bladder.

It is a recognized and successful method of treatment in all of these conditions. The technique varies with the object in view. If it is desired merely to open the bladder for the removal of a foreign body the wound may be closed at once. If we desire to establish drainage the bladder will be kept open and a buttonhole may be established by stitching the mucosa to the skin. This fistula may be left open for weeks or months, but can be closed whenever the object of the drainage has been achieved. I will not describe the method of operating because it is a simple trick entirely devoid of danger in the hands of any experienced surgeon. I regard it as one of the minor surgical procedures, and may assume that you will all agree to this proposition. A little reflection will show that the operation in men is only indicated when the bladder is full or can easily be filled with either air or water. The use of a rectal bag is unnecessary; in short, the operation is one of the simplest and easiest in all surgery. But one landmark is required, and that is the symphysis pubis, behind which the bladder is always found, and is easily punctured or incised with or without an intravesical guide. I have only to do with the operation to-day in its relation to drainage as a method of treatment in prostatic hypertrophy and its most troublesome complication, cystitis.

Some ten years ago I got the notion that suprapubic drainage would cure prostatic hypertrophy. I reasoned that by the drain I could give complete physiological and mechanical rest to the bladder, and I could prevent the unrest due to the alternately filling and emptying of the bladder. We all know that nature does its work of repair rapidly and painlessly if we can only give rest to the diseased organ. This axiom applies to all diseases without exception, including the many forms of infection. What is infection unless it be the unrest produced by microbes and their toxic products upon the tissues? Remove the toxic agents and the cells will be at rest, there will be no inflammation. The best definition of inflammation is: Inflammation is the response made by the tissues to toxic agents which invade them. I had often seen the mucosa of the bladder which had become inflamed and ulcerated change into its normal condition in a few weeks after a suprapubic section and drainage; and of course I knew that the cystitis accompanying many cases of hypertrophied prostate would disappear under the free drainage and the rest which was given the bladder by this simple operation. There can be no doubt on this point; but I had hoped that the hypertrophied prostate, under the influence of rest, would undergo an absorption and atrophy, and that a decrease in size which might be permanent would take place. In this latter hope I was doomed to disappointment.

It is true that in all cases of prostatic hypertrophy in which I made free permanent drainage for from three to ten weeks, the urine became normal in color, the cystitis was much improved and in some cases entirely cured.

It is also true that the enlarged prostate in each case became smaller, and that the patients were exceedingly comfortable during the time that the drainage was kept up. A gentleman, Mr. T., who had a severe cystitis, and who suffered extremely from his enlarged prostate, was so much relieved by the suprapubic drainage that his praise of the service rendered him was most grateful to my ears. "Why, just think of it! I sleep all night without getting up, do not have to use the catheter, have no temperature at bed-time, and my appetite has returned." This gentleman died suddenly one morning as the nurse woke him to bring his breakfast. He just raised up in bed to greet the nurse and fell over dead. In that case I was permitted to hold an autopsy, and I found that the prostate was quite large, and that there was a large myoma in the left lateral lobe of the prostate and a small one the size of a filbert in the right lobe which projected across the median line. It seems clear to me now that no matter how long I might have drained this man's bladder the myomata would probably not have atrophied, and I am reasonably certain that the cystitis would have returned with the closure of the suprapubic drain-hole and resumption of the catheter life.

I may add that the death was due to embolus, and that most likely the primary thrombus came from a plugged vesical vein.

In several of my cases I had the great pleasure of seeing the prostatic hypertrophy become much reduced and remain in this condition for over a year, the patients regarding themselves as quite cured and having thrown away their catheters. But I am compelled to report to you that with the exception of a single man, they all, twenty-six of them, were compelled to again take up the catheter life which they had abandoned for from a few weeks to fifteen months. I am convinced that as a radical cure of prostatic hypertrophy the suprapubic drainage is a failure. This result or conclusion might have been anticipated by reasoning from the basis of the facts which I brought out in the pathological part

of my paper. It was there stated that hypertrophy of the prostate is a form of neoplasm or tumor. It is either a diffuse myomatous hypertrophy, or it is a localized formation of nodular myomata, except in rare instances, which were alluded to in the first part of the paper. *Myoma cannot be made to disappear by castration, neither in men nor in women, nor can it be made to do so by giving the parts in which the myomata are located physiological and mechanical rest by means of the suprapubic drainage.* I have had no chance to try the effect of castration and drainage simultaneously, and hence cannot say what the result of this treatment would be. But there is no doubt that this treatment would be justifiable. The method must be tried; it is highly improper to condemn any rational procedure a priori. As long as we claim to be working upon a scientific basis, let us not condemn methods before we have tried them.

The following table gives the results of my suprapubic drainage work and the fate of the patients so far as known to me:

Cured	1
Leading a catheter life, as before drainage	8
Operated on after Bottini and improved	2
Operated on after Bottini and not benefited	1
Operated on after Bottini and died on the third day after the cautery of septic pyelonephritis	1
Operated on by perineal prostatectomy	2
Of these one died of pyelonephritis on the fourth day after operation, the other seems to be cured.	
One patient is now being drained suprapubically for the second time ..	1
Died of pyelonephritis, senile gangrene or pneumonia	6
Disappeared and condition unknown	4
Total	26

All of those whom I drained suprapubically were eloquent in their praises of the relief afforded to them. The patient who died of embolus was entirely relieved of his usual trouble and suffering before he died, and I am not sure that this death ought to count for much against the suprapubic operation. I regard the suprapubic drainage as the best method of giving temporary relief to those patients who are not willing or not in condition to undergo prostatectomy. The cystitis can be cured by drainage and will not always return after the drain-hole is closed.

The word prostatectomy would indicate that the whole of the prostate is removed. This has not been the case in most of the operations that have been reported. In those cases in which the whole prostate was removed, either by way of perineal section, or by the suprapubic route, or by a combination of both, the mortality has been fearful. I am unable to give reliable figures, because many of the total prostatectomies have died without being put on record. The fact which stares us in the face in estimating the value of a new operation by statistics is that only the good results are reported and the bad ones are buried. Hence, statistics based on reports of a few cases by a few men are unreliable and always misleading, because they indicate a mortality which is too low.

The results of partial prostatectomy are much better as regards mortality, and also in respect to functional improvement of the diseased organs. Thus

after a partial prostatectomy the mortality is very low, and the function of voiding urine is preserved to a degree which is entirely satisfactory. This operation is the one which I have named myomectomy. Prostatic myomectomy is the operation which I think will be adopted very generally in the future for the radical treatment of hypertrophy. The name hypertrophy of the prostate is misleading, and I would rather use the term myomatosis of the prostate. I have made sections of many specimens and parts of enlarged prostates, and even in the hardest and most resistant tumors have been able to show non-striated muscle-cells. I am convinced that the bundles of connective or fibrous tissue which we find in the sections are all derived from the connective tissue which accompanies the blood-vessels. This perivascular connective tissue surrounds the arteries and veins. It is known in biology as the lymph-sheath. All arteries and veins are surrounded by this lymph-sheath, and this lymph-sheath is continuous with the lymph-spaces around the capillaries. In my own sections I could prove that whatever of fibrillary connective tissue we find is developed from the perivascular sheaths of blood-vessels entering the prostate. The principal enlargement is made up of bundles and nodes of non-striated muscular fibers which cross each other and intermingle with each other exactly as we see them in cases of myomatous uteri. Sometimes the nodules can be easily shelled out of their beds, but oftentimes this process is very tedious, and a difficult morcellment is found to be the best way of extirpating parts of the prostatic lobes. The cases in which we find no well-defined nodules of myomatous nature, but just an even hypertrophy of the organ, all parts being equally enlarged, are uncommon. The nodular form is more frequently found. The number of cases I have examined is too small to permit of a more definite statement at the present writing.

In summing up my views on this subject an important and suggestive question arises in regard to the length of time old men may live the catheter life. Reginald Harrison and Frank Lydston state that the average length of life of a prostatic patient after he has been initiated into the catheter life is four years. Both of these men have had a large experience, and I am not inclined to doubt their statement. I know that with extreme care and under the most painstaking cleanliness, both of the person and of the catheters, two men surrounded by the luxuries of wealth have been able to live the catheter life for nine years and for eleven years, and are in good physical condition. One of these gentlemen has had several attacks of cystitis and has passed through them successfully. The other one was operated on several years ago for a stone in the bladder by litholapaxy. My own experience would lead me to place the average length of catheter life at a longer number of years, but I am not in a position to speak authoritatively on this point. At any rate, catheter life is associated with much danger and an infection may at any time take place, and even in spite of good management will often lead to pyelitis, to pyelonephritis, and to death.

Knowing the dangers of catheter life and the shortening effect it has on the duration of life, we must deliberately decide the question as to its usefulness, and we must not recommend it without great hesitation. The time when a prostatic first seeks our aid and assistance is the time when we must decide what to do. The first time a patient has retention is the time when he must either be taught to use the catheter for the purpose of drawing off the residual urine three or more times per day, or the surgeon must decide to get rid of the cause of the trouble by some other means. I believe that in the long run much suffering and

the unavoidable dangers to life and health which accompany prostatic hypertrophy can be spared to old men if right in the beginning a myomectomy is performed. The operation, if done early, before the patient's strength and recuperative powers are wasted, will be a safe one accompanied by a low death-rate.

The technique of this operation, known now as perineal prostatectomy, I shall not describe in this paper, but I will say that the operation has been frequently performed, and is highly recommended by Bryson, of St. Louis; Ferguson, of Chicago; Guiteras, Syms and Fuller, of New York. The methods which they have described and the methods of Alexander v. Dittel, Harrison and others are before us.

My operation, which I have called myomectomy, does not aim to remove the whole prostate, but merely those parts of it which have impinged upon the vesical end of the urethra, and have interfered with the function of the bladder in such a manner as to prevent complete evacuation of its contents. Myomectomy is a perineal partial prostatectomy, and its technique is practically the same as that of the perineal prostatectomies which are now before us in recent surgical literature. In order to perform a myomectomy of the prostate the capsule of this organ needs not to be removed.

CONCLUSIONS.

I. In old cases of hypertrophied prostate, palliative measures are sometimes preferable to radical measures.

II. Drainage of the bladder by the suprapubic route is preferable to perineal drainage in cases of cystitis, because the suprapubic method gives the sphincter apparatus more complete rest than the perineal buttonhole or fistula.

III. In cases of hypertrophy in which the patient's health has not been injured by chronic cystitis or nephropylitis, the dangers of myomectomy or perineal prostatectomy are minimal, and in these cases a radical and satisfactory functional result can be achieved by myomectomy.

IV. Bottini's operation must be regarded as a palliative measure, intended to enable the patient to evacuate his bladder more completely than before. It will probably have a very limited usefulness and will be crowded out of practice as the technique of myomectomy or perineal prostatectomy is perfected.

V. Bottini's operation is a dangerous operation and must not be undertaken unless most careful measurements have been made. It is often followed by extravasation of urine into the perineum, and perineal section must be done in order to save the patient's life as soon as swelling of the perineum is noticed.

VI. Myomectomy done through a perineal incision is the operation which promises the best results, and is the operation of choice. It is applicable to the greatest number of cases in which permanent cure may be expected, the kidneys being physiologically sufficient and unimpaired. The greatest dangers associated with prostatectomy are produced by injuring or removing parts of the capsule of the organ. Myomectomy must be done without this dangerous manipulation. As long as the capsule is left intact there is but little hemorrhage, and the danger of infiltration of urine and sepsis is reduced to a minimum.

TECHNIQUE OF X-RAY THERAPY.

BY DR. ROBERT KIENBOECK, of Vienna, Austria.

(ILLUSTRATED. CONCLUDED FROM JANUARY ISSUE.)

A fact of the greatest importance from a therapeutic standpoint is the knowledge that individuals in good health react in a precisely similar manner to X-ray radiance. If this were not so we could not predict the effect of the radiance. Hitherto, numerous authorities have overlooked the fact that in cases of ulceration following a single exposure, this accident was due to a high intensity of the X-ray tube used—*i. e.*, the time of exposure was disproportionate to the intensity of the light. The reaction is in slight degree due to the state of nutrition of the skin, which is dependent on the age of the individual and his general condition. We are not justified in assuming an idiosyncrasy to X-rays. However, we must bear in mind that different regions of the body present a varying susceptibility—*e. g.*, the skin of face and hands is more sensitive than that of the abdomen, and the scalp may lose its hair without obvious inflammatory changes of the skin. Mucous membrane is more easily affected than skin surfaces. Application of radiance to an area of inflamed skin (*e. g.*, lupus) produces a very intense reaction.

IV. The effect of the exposure of the skin does not show itself immediately, but only after a few days or even weeks. The rapidity of reaction varies directly with the intensity of the radiance. An exposure capable of depriving the normal skin of its hairs, without inducing any but a moderate inflammation, requires about fourteen days before the first indication of an effect appears. That the period of latency is dependent on the intensity of the radiance is well demonstrated in the experiment illustrated in figure 3. The dermatitis began centrally, directly below—*i. e.*, nearest to the tube—and within the next week spread gradually towards the periphery, while centrally the process became more and more intense.

Another example of the effect is shown in figure 4, which represents a pigeon, four weeks after several exposures.

Two weeks after the last exposure all the feathers of the back fell out; later those of the breast, the neck and the cranium. The feathers of the wings, of the sides and the rump were only sparsely epilated. Most of the downy feathers, a part of the tail feathers, and the minute hairs occurring between the feathers were also lost. A fresh crop of feathers began to show itself on the neck and wings two days after the denudation of these areas, and eight days after the back began to lose its covering. The freshly sprouting feathers look like little needles (*vide* figure 4).

Undoubtedly the rays were effective, not only on the back where they impinged directly, but also at the place of their exit, on the underside of the body. This high degree of penetration, which does not obtain in mammalia and in man, is to be accounted for by the existence of air spaces and the relatively slight weight of birds.

II. PRACTICAL APPLICATION OF THE METHOD.

X-ray therapy requires a complete armamentarium consisting of: an induction coil of 30 to 40 cm. spark-length, the primary coil being connected with the electrical source (storage batteries are not practicable), an interruptor capable of

producing 20 to 40 interruptions per second, and a durable X-ray tube in which the amount of air can be regulated.

The practical lessons deduced from the foregoing theoretical considerations are as follows: A *medium-soft* tube is placed just above the part to be treated and at a distance of from 15 to 20 cm. The portion of skin which is not to be treated should be protected by a sheet of lead, 0.5 mm. thick, under which has been placed a strip of flannel to protect the skin from flying sparks. The size and configuration of the surface to be treated determine the distance at which the tube must be placed, and also whether the radiance must be directed from different points. Areas of small extent are best acted upon with the tube in proximity, whereas large, flat surfaces should receive rays coming from a greater distance. Curved surfaces, such as the face or cranium, require a radiance coming from various positions, care being taken to obtain as far as possible a like exposure throughout the entire extent. From a practical standpoint I would advise a physician always to place the tube at a certain moderate distance; to employ tubes of high intensity—"critical tubes;" to use rapid interruptions, and vary only the time of each sitting, in accordance with his judgment; thus he will easily acquire a just estimate of the efficiency of the radiance, thereby avoiding a too prolonged *seance*.



FIG. 4.

The tube used must be capable of producing a good picture of the thorax of a medium-sized man, when viewed through the fluoroscope at a distance of 60 cm. from the focus. With an interruptor giving interruptions at the rate of 20 to 30 a second, a good skiagram should be obtained with an exposure of thirty seconds. With an equipment of this description the time required for each sitting will be between five and twenty minutes. Although a five minutes' exposure will produce a slight effect, a radiance lasting twenty minutes may be regarded as the "*normal exposure*." Such an exposure will have the following results: on normal skin, after a period of latency of fourteen days, the hair will fall out, accompanied by an erythema lasting a few days; on skin affected with sycosis the loss of hair will occur as early as the eighth day, accompanied by the formation of numerous pustules; lupus tissue will become exfoliated after a lapse of a week. We can, on the other hand, produce the effect of normal exposure of twenty minutes by dividing the action of the radiance over several sittings of shorter duration.

Taking into consideration the intensity of the radiance, the number of *seances* and the length of intermissions, we may formulate the following three methods of X-ray therapy:

1. Daily sittings, with a radiance of slight intensity, lasting five minutes, continued until the first symptoms of reaction appear.

2. (a) Sittings, with a radiance of medium intensity, twice a week until reaction begins to be manifest (about two weeks); or (b) three or four sittings, with a radiance of medium intensity, given on alternate days.

3. The "normal exposure" in a single sitting, and await reaction.

Treatment by any of these methods is appropriate and conforms to the fundamental principles laid down above. The second is the method to be preferred, inasmuch as the first is tedious for both patient and physician, and the third demands a certain experience on the part of the operator. After the first sign of reaction appears we deem it advisable to await the termination of the characteristic inflammatory process, and then, if necessary, repeat the exposure. If in using the second and third methods absolutely no reaction occurs at the end of three weeks, we may feel justified in repeating the "normal exposure;" if, however, a mild reaction, non-progressive in character, has taken place, an additional exposure, less than normal, can be applied. As stated above, the second "normal exposure" is made after the subsidence of the inflammatory reaction excited by the first; thus this treatment may involve, in accordance with the nature of the case, repetition of X-ray applications extending over months or even years.

In a very few cases of hypertrichosis, in some cases of sycosis, and in nearly all cases of herpes tonsurans and favus, a single "normal exposure" sufficed; *i. e.*, using the method No. 3, a perfect cure resulted after a single sitting.

III.

In conclusion, I wish to submit the following important facts: Radiotherapy is as beneficial in the hands of an expert as it is deleterious—nay, positively harmful—if applied by one who is inexperienced. The latter will likely induce, by overexposure, a severe ulcerative process which may extend over many months or even years, and end in a cicatrix. The physician can no longer shield himself behind a supposed idiosyncrasy of his patient. An overexposure may occur in various ways. Formerly it was customary to apply the X-ray daily over a long period until the effect became visible. If the intensity of the radiance at each *seance* was too great there was set up a severe inflammation, which grew worse in spite of the cessation of the applications; therefore, the admonition to suspend treatment as soon as severe reaction ensues is futile. The overexposed tissue will break down centrally, the destructive process extending superficially and deeply.

In like manner we must sound a warning against another method which has been advocated, namely: "Begin treatment with a radiance of low intensity and continue with gradually increasing intensities at short intervals." Great damage has been wrought in cases where the neighboring skin has not been protected by lead. It must always be borne in mind how easily an overexposure can be produced if the tube is placed too near the skin. A radiance lasting twenty minutes from eight centimeters distance is thirty-two times as intense as a radiance lasting ten minutes from a distance of thirty-two centimeters. Thus a single exposure of relatively short duration may produce an X-ray eschar.

Finally, the physician should remember to protect the skin of his own face and hands from accidental exposure. He should avoid approaching the active tube, and should remain, if possible, behind the plane of the antikathodic mir-

ror. A mask of lead may be occasionally useful. Ignorance of the practical working of the apparatus may be just as harmful as adherence to wrong principles, which are even to-day still advocated. We earnestly recommend a thorough understanding of the fundamental principles of radiotherapy, extreme caution in all manipulations, and careful experimentation on animals.

TRANSMISSION OF CONSUMPTION.

By LOUIS H. BEHRENS, M. D., of St. Louis, Missouri.

From the trend of recent reports we are almost forced to declare hereditary consumption among the rare, if at all, existing conditions. We do so, however, with considerable hesitation, and a serious doubt if it be true. Intuitively we ask of our patient presenting some lung involvement the family history with reference to consumption existing or having existed in some member of the family or blood relatives, and therefore cling with grim-like tenacity to that thought that appears so difficult to alter.

Yet, when I peruse my records and sum up my past observations, I must say that only in about one case in four could I get a satisfactory answer to my question regarding consumption being or having been in the patient's family; then in three out of every four the consumption seems only to be in the one member of the family, and that one our patient.

I have attributed this apparent inaccuracy to the fear and dread the majority have of the disease; some are thrown almost into a frenzy at the mention of the word consumption. Most people, either by accident or design rather, use terms different upon questioning; however, it is often only another name for consumption, viz., wasting disease, general debility, change of life, continued pneumonia, chronic bronchitis, chronic asthma, lung disease, etc., etc.—terms familiar to all of us; and yet superficial questioning often leaves no doubt in our minds of the real cause.

The physician, too often perhaps, keeps others in ignorance, either willfully or regretting to make its seriousness known; and in this day of industrial and other insurance, the idea seems to be that if phthisis pulmonalis is put on the health department's mortuary report, or report to the insurance company, that the policy is *nil*.

So, taking these matters into consideration, I have condoled the imperfect and rare hereditary history, by regarding some patients as prevaricators, and others as ignorant, and others still as misinformed; and tried at least to regard transmission of phthisis pulmonalis as being in many cases due to heredity, and I presume I was not the only one that really had this idea formerly.

But later investigation brought new light, which many accept and many doubt, that phthisis pulmonalis is only conveyed as a predisposing factor from parent to child, the tendency thereto, not the disease, being inherited; and so little thought was given to the hereditary transmission of tuberculosis by Koch in his valuable and astounding essay on "The Fight Against Tuberculosis," read at the British Congress on Tuberculosis, July 23, 1901, that it is dismissed with these few words, viz.:

"Great importance used to be attached to the hereditary transmission of tuberculosis. Now, however, it has been demonstrated by thorough investiga-

tion that though hereditary tuberculosis is not absolutely non-existent, it is nevertheless extremely rare, and we are at liberty in considering our practical measures, to leave this form of origination entirely out of account." (Quoted.)

Enough to stop at this and become reconciled; but another surprise bobs up serenely, in which a medical confrere asserts that tubercular ancestry seemingly renders immunity to a considerable degree, and in a study of two hundred and forty cases of consumption, twenty-four and eight-tenths per cent. gave the history of parental tuberculosis, and in sixty families with tuberculosis in the parent, in twenty-eight families of these only one of several children were afflicted; the author adds that in many no positive records could be elicited as to whether parental tuberculosis existed previous to patient's birth.

A certain immunity is proven in his general report, but the imperfect history which he claims to get as to phthisis existing before or after birth of patient leads us to feel that doubt. But then why is it that more children of each family were not afflicted, if it depended on inheritance?

Again, how can this be explained? We read, hear of, or elicit this rather peculiar history: father or mother, perhaps both, and maybe, in addition, grandparent, uncle or aunt, have had phthisis. It seems just as the children reach about a certain age, usually entering manhood or womanhood, the majority of them die of usually florid phthisis, and it is a strange fact that all prophylactic measures are thoroughly observed. In small communities it becomes village gossip: So and So has had a brother or sister die of consumption at nineteen years (say) of age; So and So is doomed seemingly and dies, but we can partially reconcile ourselves with this thought: that fear has a devitalizing effect, and just as the person nears that doomed and suspicious age, he is a fit subject for tubercular invasion and succumbs to its influence and sees only death awaiting. We find it thus in our most intelligent families where it does exist, the brightest flowers are removed, while often the fearless are spared, often classed as the no-good son or daughter. So this may be cited as transmission of consumption by fearing same.

That consumption is due most entirely to the invasion of the tubercle bacillus is proven by finding it in most every case of tuberculosis. It finds its way by inhalation, ingestion or inoculation; it requires a certain field; it becomes energetic, multiplies, involves new areas in the respiratory, alimentary, glandular and many of the bodily tissues, involving one or several or all the tissues, giving rise to the general term tuberculosis, or specified by the special area or areas involved; giving objective and subjective signs and symptoms that need no comment here; nor do we need make reference to what is necessary to create the so-styled suitable field for the propagation of the tubercle bacillus.

That human sputum is the only source of transmission of human tuberculosis is the stumbling-block to-day; that it is the main source observers admit; that it is the most virulent form, and the most frequent cause of transmission of consumption, we dare not doubt; but it is not the only contending factor in the spread of tuberculosis.

Maybe too long have we regarded dietary carefulness, inspection of the next most important agent, the bovine, as too important for serious consideration. Nevertheless, granting all differences in the morphological construction of the bovine and human tubercle bacilli, we must appreciate the fact that though Koch and others speak of the inertness as an infective agent of the bovine tubercle

bacillus on the human, yet others disagree and cite instances just the reverse; and while Koch reports very few cases of primary tubercular infection of the intestine or stomach, yet these few bespeak caution and care before entirely dismissing infected meat, milk, butter, etc., as causative factors in its transmission, though limited it be.

He cites interesting experiments in which calves, swine, goats, rabbits were fed upon human sputa infected with tubercle bacilli. The tubercle bacillus by every devisable means were placed in the atmosphere surrounding these animals, but not one became infected with tuberculosis from the human tubercle bacillus; but these same animals were treated with bovine tubercle bacilli in a similar manner, and all contracted the disease; looks odd to be infected and not be able to infect.

The experiments have not, of course, been carried out on the human in the same manner, but Repp, D. V. P., who is quoted among the investigators on this side, has compiled some extremely interesting material in the October 26th and November 2d edition *American Medicine*. He agrees with Koch in the general investigations made, and summarizes his report as follows:

1. Tuberculosis may be transmitted to animals through eating meat of certain other animals which are infected with tuberculosis, or by being inoculated with it.

2. Tuberculosis may be transmitted to animals through their ingestion of milk of certain cows which are tuberculous, both when the udder is diseased and when it is healthy.

3. The meat and milk of certain tuberculous animals contain living virulent tubercle bacilli.

He is recognized by Koch as being a very reliable investigator, being the veterinarian of the Experiment Station, Iowa State College.

Dr. M. P. Ravenel, in the September number *Univ. of Penn. Med. Bull.*, says that as the bovine bacillus has considerably greater pathogenic power than the human bacillus, for the large majority of experimental animals, and declares it justifiable to hold that this increase of virulence will also hold for man.

Delapine reports injecting of four calves with mixed sputum of human tubercular subjects: only two survived long enough to arrive at definite results and they contracted tuberculosis as a result of ingestion of, or peritoneal infection with, human sputum.

Now Crookshank believes that human and bovine tuberculosis are distinct varieties of the same disease; if the carcass is well nourished and does contain some tubercle deposits, he regards the meat as wholesome and danger practically nil.

Dr. S. V. Salmon, chief of the Bureau of Animal Industry, in a paper entitled "Report of a Committee on Animal Diseases and Animal Food," says if Dr. Koch's position is correct with reference to insusceptibility of mankind to bovine tuberculosis, it does not, by any means, follow that the products of these animals are harmless; unfortunately, this belief is being used for the sale of tuberculous meat and milk. That the diseases are not absolutely distinct is indicated by this fact: that *tuberculin* made from human tubercle bacilli causes a reaction in cattle affected with bovine tuberculosis. Concludes by saying that bovine tuberculosis has an extensive range of pathogenic power on other animals; what other virulent germ with such a range is not also virulent for man?

Virchow agrees with Koch regarding the differences between human and bovine tuberculosis, and regards Koch's assertion that human tuberculosis cannot be successfully inoculated in bovine material as being erratic in its unqualified statement, and claims that cases have come under his observation which leads him to believe that such infection is positive, no other accountable means being open.

Dr. Jesus Chico, of Mexico, claims that five out of a family of seven, to his knowledge, died from eating the infected lungs of a cow, from tuberculosis.

Dr. Demme reports four infants in the Children's Hospital in Berne that died from infected milk ingestion, from intestinal and mesenteric tuberculosis.

Dr. Ernst reports death of three children in one family of tuberculosis; the cow furnishing this milk died later, and was found tubercular; also udder involvement.

Dr. Leonhardt cites cases of two children fed from milk of tubercular cow.

And so on observers galore fill our medical literature with such facts, and bespeak the dangers from these sources.

To the credit of Prof. Koch let it be said that he does not positively assert that infection from the bovine source is impossible. I think he is often misquoted, and his assertions are exaggerated, but his thoughts lend to much leeway to those that would like to pooh-pooh the prevalent idea and profit by its downfall.

To summarize:

1. That human sputa stands pre-eminent when tubercular in the transmission of consumption.
2. That hereditary consumption is rare, and can be dismissed with passing notice.
3. That the predisposition is inherited, but that immunity is rendered to the offspring of a consumptive born during the disease of parent is far from being proven.
4. That meat, milk, cheese, butter, etc., derived from cattle and animals infected with tuberculosis can produce tuberculosis in the human being. I believe to be a fact.
5. That if laws more stringent regarding expectoration, isolation, inspection of animals, hygiene and sanitation be enforced, I sincerely think that consumption would belong to that classification of diseases as scurvy, small-pox, cholera, etc.; heard of frequently, but seldom seen.

CLINICAL REPORTS.

A CASE OF ACUTE SYPHILITIC INSANITY.

BY SIDNEY I. SCHWAB, M. D., of St. Louis, Missouri.

It is no longer a question of doubt that syphilis is an important etiological factor in the production of insanity. The most important mental affection in which syphilis plays a considerable role is undoubtedly dementia paralytica. Here the causal relation between an early acquired syphilis and the late developing mental symptoms is difficult of explanation except upon the ground of changes in the central nervous system, metasyphilitic or parasymphilitic in origin. The pathological changes are due either to the delayed action of the specific toxin upon the structure of the central nervous system, or to the effect upon the central nervous elements of the early intoxication, which renders them less stable and more easily affected by any destructive agencies to which the nervous system may be exposed. The insanities depending upon syphilitic lesions of an organic nature, such as gummata, blood vessel changes, etc., are so well known and so definitely recognized that they are seldom the subject of discussion except in unusual instances. The neuroses due to syphilis, such as the neurasthenic forms of insanity, the phobias, etc., are likewise not uncommon. An attack of acute insanity, coincident with a specific infection and amenable to the same therapy as the disease itself, is very rare, and merits attention as throwing some light upon the effect of an acute specific toxemia upon an otherwise presumably normal nervous system. The following case illustrates very well what may be termed an acute syphilitic dementia:

Wm. H., age fifty-one years, entered the nervous department of the Alexian Brothers Hospital December 14, 1901, with the following history, which was obtained from his family physician and from members of his own family (the patient himself was in no condition to add any data to it): Some time in October, the precise date being unknown, the patient noticed a small sore on his penis, involving the frenum. The origin of this sore, according to the patient's report then, was some injury received during the act of micturition. Some two or three weeks later an eruption appeared over the entire body, for which he was treated by his family physician, who correctly diagnosed the case as one of secondary syphilis. During this time the patient evidently received considerable doses of mercury. About two weeks later the patient showed the first evidences of a profound mental disturbance. These began quite suddenly with a great degree of motor restlessness and a complete amnesia. There was also tremor of the hands. At about this time the patient was brought to the hospital. When first seen he presented the appearance of a typical dement; he was unclean, there was incontinence of both rectum and bladder, due wholly to his mental state. There was a great deal of motor restlessness, which was shown by aimless wandering up and down his room. When questioned, he neither understood what was asked, nor had he the power of voluntary logical or continuous speech. He was totally unaware of his own condition, of his whereabouts, of the time, or of any events immediately preceding his attack. His speech was profoundly affected, and owing to the tremor of his lips and tongue, and to the constant dribbling of saliva from the corners of his mouth, it was almost impossible to understand the few words

which he now and then uttered. In other words, he presented a typical picture of a secondary dementia, such as might follow an attack of mania or melancholia. Physical examination showed nothing abnormal about the internal organs; the urine contained no albumin, no sugar. Over his whole body, especially marked over the abdomen and back, was a fading macular syphilide, typical in appearance and distribution. There was no glandular enlargement. The knee-jerks were slightly increased; pupils normal. Owing to the patient's mental state, it was impossible to test the sensation, but there was presumably no marked disturbance. There was no elevation of temperature. The patient was unclean and repulsive to the last degree. A vigorous antisyphilitic treatment was immediately begun, consisting of the protiodide of mercury and potassium iodide. The result of this was most striking. In four or five days there was a most marked improvement in the mental condition, and in two weeks the patient was discharged practically cured, as far as his psychical symptoms are concerned. It was interesting to note that the skin lesions disappeared at the same time, and in fact it was possible to observe a certain relation between the fading of the syphilide and the disappearance of the mental symptoms. Since that time the patient has been under observation, but has shown no evidence of a return of his former mental affection, or any physical evidence of an organic process in his brain or cord. He has absolutely no recollection of the period between the first appearance of the mental symptoms and his early days at the hospital.

In considering this case, the possibility of a mercurial intoxication was thought of, but this was ruled out by the fact that the mercurial treatment was continued more vigorously at the hospital than before, and that an immediate improvement, both physical and mental, followed.

This brief clinical *resume* is meant to illustrate two points: first, that syphilis in the constitutional stage can produce mental symptoms of a profound degree, simulating in every respect the dementias either primary or secondary to some previous mental affection; secondly, that this form of acute syphilitic insanity is strikingly amenable to specific treatment, and that a certain relation exists between the skin manifestations and the outbreak and disappearance of the mental symptoms. There is scarcely any doubt that the explanation of this mental attack is to be found in the assumption that it is due to a toxin caused by the specific infection. It is no doubt a part of a general toxemia, of which the skin manifestations form one phase and the mental symptoms another.

ABDOMINAL TUMORS.

By JESSE S. MYER, M. D., of St. Louis, Missouri.

(CONTINUED FROM JANUARY NUMBER.)

I am indebted to Dr. Carson for the opportunity to observe and report the following three cases, in his service at the Mullanphy Hospital. The operation in each case was done by him.

SARCOMA OF THE POSTERIOR ABDOMINAL WALL. (RETRO-PERITONEAL LYMPH NODES.)

J. M., farmer, age forty-six; presented no history of hereditary taint; father dying of "dropsy," the mother of "old age" at seventy. Has five children, all in good health; wife has had no miscarriages.

The patient had never been confined to his bed excepting through injuries; was kicked by horses at four different times: once on the hip, twice on the ankle, and once in the "stomach" (left hypochondriac region). This last mishap occurred eight or ten years ago, and disabled him for a period of four or five months. He knows nothing of the nature of the injury sustained. There was no visible external injury, nor was there a tumefaction. He only recalls that the pain was very severe, and more or less continuous; that he vomited frequently, and that he was compelled to wear a support because of the "dragging-down sensation" which followed.

He thinks that he has never been entirely well since the injury. From time to time he has had attacks of "indigestion" and vomiting, usually brought on by overindulgence in food. The bowels have been more or less constipated throughout. At the time of this injury he weighed one hundred and fifty-five pounds.

Five or six years ago he noticed a small nodule on the lower pole of the left testicle about the size of a hazel-nut. This gradually increased to the size of a base-ball and was removed by a surgeon seven months ago. The recovery from the operation was complete. (The physician who performed the operation informed me, upon inquiry, that the growth was a solid one, having every appearance of a sarcoma of the testicle, but that the tumor had not been preserved, and sections had not been made. Judging, however, from the description of the tumor, given by both the physician and the patient, I have little doubt that it was a malignant growth of the testicle, though of slow growth (if his dates are correct).)

The patient's entrance into the hospital (November 10, 1901) was prompted by severe pains in the upper part of the abdomen, seeming to have their origin in the left lumbar region, and radiating toward the back and the left hip and thigh. At times he must "drag the left leg." His appetite is good, bowels irregular, and the appearance of the stools normal. He feels that he is gradually losing strength and becoming incapacitated for work. Present weight is one hundred and thirty pounds.

Physical Examination.—Upon deep palpation a tumor is made out in the left side of the abdomen, confined chiefly to the left upper quadrant of the umbilical region. It is apparently about the size of a goose egg, its long diameter extending obliquely from the umbilicus to the ninth costal cartilage. (Fig. III.)

It seems to have its origin along the spinal column, and in its growth has extended obliquely upward and backward. Upon deep palpation the growth can be grasped between the fingers, but is absolutely immobile. The spleen occupies its normal position, and is of normal size, there being a distinct tympanitic area between the splenic dullness and that of the tumor. The kidney cannot be palpated.

Inflation of the stomach, which proved to be in the normal position, obscured the upper half of the tumor completely, and the lower half could only be felt with great difficulty. (Fig. IV.)

The analysis of the gastric contents, removed at the same sitting, revealed nothing abnormal.

Inflation of the colon obscured completely the lower portion of the tumor. The *rectal* examination revealed no enlarged lymph nodes.

The *blood* showed only evidence of a mild secondary anemia.

The *urine* contained no abnormal constituents, though the indican was markedly increased at times.

In view of (1) the location of the tumor, viz., posterior to the stomach and colon, (2) the immobility, (3) history of a growth of the left testicle, (4) an injury, producing, no doubt, a *locus minoris resistentiæ*, a diagnosis of metastatic sarcoma having its origin in the retroperitoneal lymph nodes was ventured.

The patient receiving but little encouragement, declined surgical interference and returned to his home.

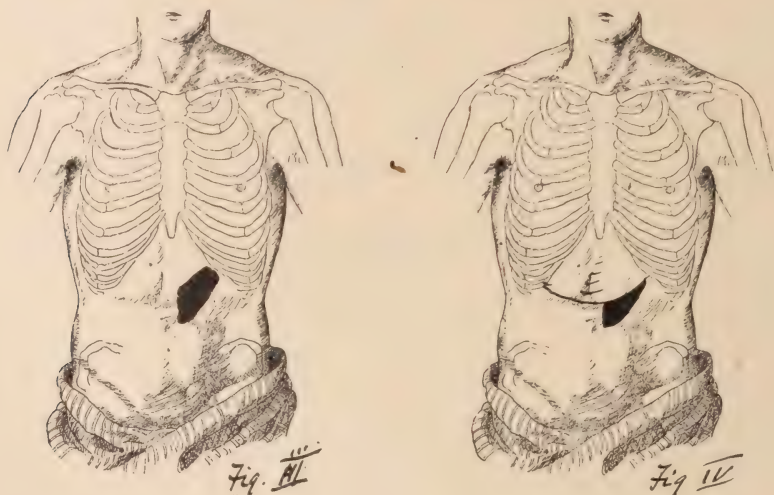
Two months later he came to the hospital, with all of his former symptoms

greatly exaggerated, and now requested an operation as a last resort. The tumor had grown rapidly and was now about the size of a child's head, occupying the same relative position. The complete localization of the tumor seemed to justify an attempt at removal.

The incision revealed a somewhat fluctuant, exceedingly vascular tumor, solidly anchored to the posterior abdominal wall by a wide base along the spinal column. An effort to remove the entire growth was futile because of the excessive hemorrhage produced upon splitting the capsule. The mass removed was of a gelatinous consistency, and proved to be, upon microscopical examination, small round-cell sarcoma.

Though the exact origin of the growth could not be determined, there seems little doubt but that it was from the retroperitoneal lymph nodes.

The patient recovered nicely from the operation and is still living.



CARCINOMA OF THE PYLORUS AND LESSER CURVATURE OF THE STOMACH, WITH A METASTATIC GROWTH IN THE RIGHT LUMBAR REGION, SIMULATING A MOVABLE KIDNEY.

J. C., Scotchman, fifty years of age; dentist. Mother died of "tumor of the stomach;" also an aunt. He claims to have been in perfect health up to two months ago. About this time he felt a hard mass in the right side, and simultaneously developed symptoms of "indigestion," loss of appetite, vomiting, etc. Sensations of bloating and fullness occurred after eating; vomiting every two or three days. There was practically no pain. His usual weight was one hundred and sixty-five pounds. Both weight and strength gradually declined. The vomiting became more frequent, occurring every day, usually early in the morning. The vomitus was very sour, both to the taste and smell, of a dark brown color, very copious, often containing particles of food taken on the previous day. He noticed, at no time, pure blood. The bowels have been quite constipated during the illness; appetite has remained good throughout. Cares little for meats.

At the present time (January 18, 1902) he weighs one hundred and thirty pounds. He retains practically nothing that he eats more than a few hours. He has the impression that none of the food "passes through," but, on the contrary, that he expels more than he ingests. Is too weak to be about; has frequent attacks of palpitation of the heart, headaches, etc.

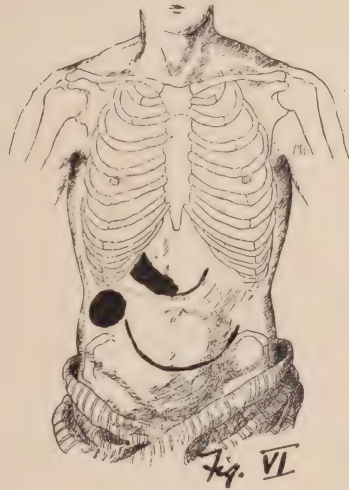
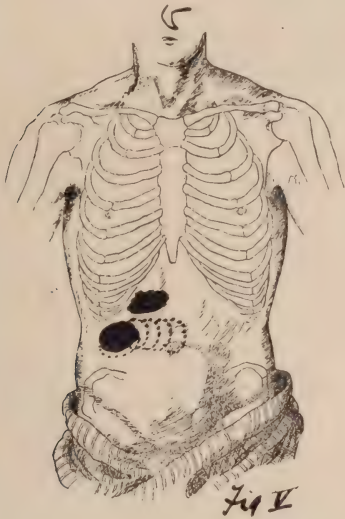
Status Præsens.—The patient is greatly emaciated, eyes are sunken, thorax long and slender, expansion poor. Cardiac sounds and dullness normal, pulse ninety, small and soft. The skin and mucous membranes are pale and livid and extremities cold. Enlarged lymph nodes in the groin (none in the supraclavicular space), no edema.

The abdomen is slightly distended and rather tense. A mass is easily distinguished in the epigastric region, extending from the median line to the cartilage of the ninth rib (right). It seems about one and one-half by three inches. It is slightly movable, both upon respiration and to manipulation. (Fig. V.)

When the patient relaxes his muscles the mass can be grasped between the fingers. There is an area of tympany between the tumor and the liver dullness. The inflation of the stomach carries it downward.

The stomach is greatly displaced and dilated to the extent indicated in Fig. VI.

Another mass is felt in the right lumbar region, just below the free margin of the ribs. In size and shape it corresponds to the kidney, being longer in the horizontal than in the transverse diameter. Can be pushed forward by pressure from behind. Upon deep inspiration it moves downward about an inch, but



cannot be forced upwards under the ribs. On bimanual palpation it is readily grasped between the fingers. It is easily forced to the left, and even falls to the median line when the patient lies on the left side (Fig. V.). Inflation of the colon first pushes it slightly to the left, and then obscures it entirely. It apparently has no connection with the liver or gall-bladder.

The urine contains no abnormal constituents, and has never contained blood.

Analysis of the Stomach Contents.—Ewald test breakfast, removed one hour after ingestion, amount 600 cc., of a mushy consistency, brownish color (coffee grounds). Sour odor, acid in reaction, free HCl. negative, lactic acid positive, in large quantity, peptogenic power fair, etc., etc. The microscopic examination revealed large numbers of long, non-motile bacilli (probably Oppler-Boas), oil globules and muscle fibers (from butter and meat eaten on previous day), plant rests, few starch granules, and yeast cells (not branching).

There was no doubt as to the nature of the tumor in the epigastrium, viz.: carcinoma of the pylorus and lesser curvature of the stomach. The diagnosis was based on the following points: (1) The sudden development of the symptoms, rapid emaciation, etc.; (2) the size and position of the tumor; (3) the dilatation of the stomach, and stagnation of the gastric contents following stenosis of

the pylorus: (4) absence of HCl. acid, and presence of large quantity of lactic acid.

There was some doubt, however, as to the nature of the tumor in the right lumbar region. Its size, shape, consistency, mobility, position behind the colon, etc., led to the supposition that it was the kidney retained in such a position through adhesions. The possibility of a concomitant or metastatic carcinoma of the posterior wall of the colon was also considered.

In order to relieve the stagnation of the stomach contents, brought about by a complete stenosis of the pylorus, a gastro-enterostomy was done. The patient did not respond to rectal feeding, gradually declined, and died within a week, the result of inanition.

The post-mortem revealed a carcinoma of the pylorus, lesser curvature and posterior wall of the stomach; the lesser curvature being involved in about half its extent, and the posterior wall correspondingly. The stenosis of the pylorus is complete and, consequently, the stomach immensely dilated. The cauliflower

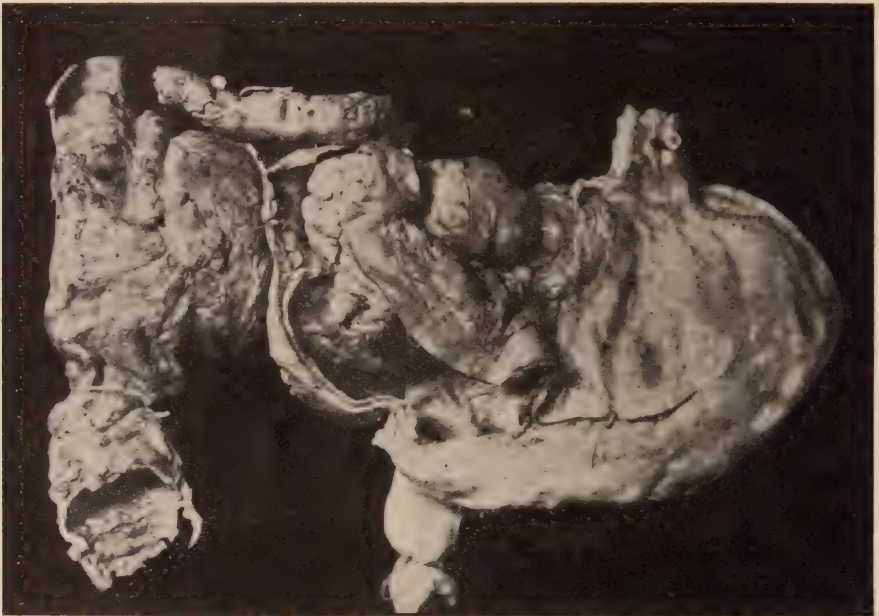


FIG. VII.

excrecence had grown into the lumen of the duodenum, dilating it to about the size of a hen's egg. The gastric lymph nodes of the lesser curvature are decidedly involved, varying from the size of a pea to that of an egg. The anastomosis between the stomach and the jejunum is patent, and union complete. There is no evidence whatever of peritonitis.

The tumor in the right lumbar region, which had been mistaken for the kidney, proves to be a fluctuant, metastatic growth about the size of a man's fist. It rests just behind the splenic flexure of the colon, and is attached through ligamentous bands and adhesions to the pyloric end of the stomach. The colon passes directly over the tumor, and is firmly adherent to it. The colon itself, however, is in no way involved. The chief interest of this case lies, not in the rarity of the primary tumor, but in the position of a metastatic growth and its clinical resemblance to a movable kidney.

[TO BE CONTINUED.]

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EDITED BY

WILLARD BARTLETT, M. D.

WALTER BAUMGARTEN, M. D.

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MARTIN F. ENGMAN, M. D.

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SIDNEY I. SCHWAB, M. D.

OTHO F. BALL, M. D. Managing Editor.

COLLABORATORS:

MAX MICHAELIS, M. D.,

Docent of Internal Medicine, University of Berlin, Germany.

FRANZ NEUGEBAUER, M. D.,

Professor; Director of the Evangelical Hospital, Warsaw, Russia.

JULIUS NEUMANN, M. D.,

Docent of Obstetrics and Gynecology, University of Vienna, Austria.

JULIUS SCHNITZLER, M. D.,

Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,

Berlin, Germany.

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EDITORIAL COMMENT.

THE ST. LOUIS MEDICAL SOCIETY.

One of the most gratifying signs of the times, medically speaking, is the flourishing condition of the St. Louis Medical Society. The newly elected officers are a unit in the effort to make this venerable organization a worthy representative of the World's Fair city. It is indeed gratifying to note that the high class of papers presented, the lively discussions and the increased attendance are repaying the earnest attempt of these men in the right direction. As president, Dr. Carson has shown care and foresight in choosing the heads of committees, the men on whom the work of the committees seems always to fall.

With the executive committee rests the fate of the society for the time being, for its labors determine whether or not the meetings shall be interesting, since they prepare the programme. In this regard much can be said of the innovations which this committee has instituted. Not content with living from hand to mouth, as the expression goes, these three gentlemen have made out a schedule of all the meetings between now and the summer vacation, and have by persistent effort secured valuable papers for most of the meetings, though months ahead. Not content with this, a circular letter has just been sent to all the members, urging them to redoubled efforts at production, attendance and discussion. Profitable discussions have been assured by a system of appointing gentlemen of known ability along certain lines to open the discussions on subjects appertaining thereto.

The pathological committee was formerly regarded as simply an ornament to the society's catalogue, and appointment thereon as merely a warrant of the appointee's ability; now it is different. Dr. Carson announced in the beginning that he appointed this committee to work, and for no other reason. As at present conducted, specimens are presented before the society and, when the member has no objections, turned over to the pathological committee for examination and report, before a discussion can be held. After this report has been handed to the executive committee, a place for report and discussion is made on the programme, if this latter committee considers the matter of sufficient value. Thus the time of the society is never taken up by the discussion of a specimen which may possess no importance warranting the same.

As an evidence of the willingness and desire of the body to encourage scientific work, a sum of money has been set aside for the purchase of a microscope; a most commendable expenditure it would seem.

Dr. A. E. Halstead, the Chicago surgeon, was present and took part on the programme of a recent meeting, at the invitation of the president, Dr. Carson; and in the visitor's remarks were found the inspiration for fresh work. It will be agreeable news to the fraternity in St. Louis that money has been set aside to defray expenses, and that arrangements are now in progress which will insure our hearing, at no distant date, one or more of the lights of the medical profession in America.

The officers of the old St. Louis Medical Society are sparing no efforts to make it the equal of any similar organization. Will not the profession in this city rally as one man to their support?

A NEW SURGICAL OPERATION.

The entrance of surgery into the treatment of diseases heretofore considered purely medical marks a new epoch in that branch of the science. Kidney decapsulation for chronic Bright's disease is now before us.

Novel as was Harrison's announcement of treating acute nephritis by incising the kidney capsule to remove the compression of the organ due to the unyielding nature of the capsule to the acute swelling of the parenchyma, yet rather startling was the venture of Edebohls in attacking chronic nephritis surgically.

Edebohls (*Med. Rec.*, December 21, 1901) first began by noting that cases of nephritis in loose kidneys were much improved and even cured after nephropexy. In the beginning this was regarded as a natural consequence of the fixation, but later he came to the conclusion that the decapsulation of the kidney was the acting cause. (In doing his nephrorraphies he dissected the proper capsule of the kidney away from the organ.) Having arrived at this conclusion he operated directly for chronic Bright's disease by removing the proper capsule of the kidney and cutting it away from the organ. The good results come not from the relief of tension, but from an improved blood supply. The denuded kidney, which is vascular, comes directly in contact with the fatty capsule, which is liberally supplied with blood vessels.

While Dr. Edebohls has operated without a death, we cannot expect the same happy results to follow every operation, or in the wake of every operator. A man with kidneys much damaged is on the brink of death, and any operative procedure is liable to have a fatal termination through shock. To damaged kid-

neys is due most of what mortality prostatectomy has, and plays an important role in any operation on the urinary apparatus. Time and experience only can show what cases may be benefited or are suited for the operation.

The proceeding may be considered extremely radical, and, no doubt, it will be difficult to convince a patient who has no more symptoms than those which occur in many cases of chronic interstitial nephritis to submit to a surgical undertaking of the magnitude of kidney decapsulation. Yet, if further experience bears out the good results reported by Dr. Edebohls, he may well consider himself the benefactor of a large number of incurables. But we will have to take with caution good results reported in chronic nephritis, especially interstitial nephritis. Some of these cases run such an extended course, lasting from fifteen to twenty or more years, and pass through such a variation of amelioration and exacerbation, that reports of improvement have to be considered in connection with the natural cycle of the disease. Interstitial nephritis, too, may at times be so latent that it is extremely difficult to detect, thus simulating a cure, and at another time in the same case, due to some exciting cause, present a urine loaded with kidney elements.

However this may be, we cannot but commend the temerity of the operation.

THE PATHOLOGY OF INFANTILE ATROPHY.

Many authorities still doubt the propriety of admitting marasmus (infantile atrophy) in the classification of infantile diseases. It has been asserted that marasmus is not a specific disease, but merely a symptom of a great variety of pathologic affections. Thus, tuberculosis, syphilis, chronic suppuration, and chronic pneumonia are given as the cause. But it must be admitted that the most common variety depends on some gastro-enteric lesion. Some content themselves by calling this form gastro-intestinal catarrh, or chronic enteritis.

The question has its many sides, but after excluding all these diseases, a disorder remains which lacks the positive clinical characters of a chronic enteritis. There may be little or no diarrhea, food is taken ravenously, and yet the infant wastes. Until more is known concerning the intricacies of tissue anabolism these cases are conveniently grouped under the term marasmus.

Baginsky makes this disorder really a specific disease, in that he gives it a characteristic pathologic anatomy. He claims that degeneration and atrophy of the greater portion of the duodenal and jejunal mucous membrane exists in these cases. Here and there are normal patches, but the abnormality of structure is everywhere patent. Overgrowths of villi, destroyed villi, increased connective tissue, irregular cells, and destruction of the glandular layer may readily be demonstrated.

Moreover, he has found that only about one-half of the nitrogen of the food is absorbed, the remainder being excreted with the feces. From this pathological view the impression is obtained that marasmus is a sequel of a severe intestinal infection that leaves destructive alterations in the absorptive cells of the small intestine.

This view has been combated by Fede, Heubner, and others, in that they have failed to find these intestinal lesions in some fatal cases of marasmus, but Baginsky has answered that those exceptional cases were really cases of inanition.

Czerny and Kellar have offered the theory of acid intoxication to explain the

atrophic symptoms. Kellar found an increase of ammonia in the urine, and from this it was inferred that more acid enters the body and the ammonia is formed to neutralize this excessive acidity. The acidity arises from a decomposition of the fats and carbohydrates. Ingenious as this theory is, it has been almost hopelessly upset by the careful investigation of Pfaundler and others, so that it may almost be disregarded.

It has been suggested that marasmus is a trophoneurosis, the atrophy being entirely due to certain changes in the nervous system, and Mueller has reported extensive changes in the cells of the brain and spinal cord, degenerate in character and depending on a previous gastro-enteric intoxication. It is conceivable that a degeneration of certain trophic cells may cause extensive atrophy.

Thus, while the theory of Baginsky is corroborated by the clinical history, it is obvious that the pathology is yet unsettled.

TEN MILLIONS FOR MEDICAL RESEARCH.

Poverty, ignorance, vice and disease are the four great barriers to the progress of civilization and the propagators of misery. Poverty is largely the result of vice or vicious habits. The physicians who have visited the homes of the honest sons of toil know this. They see the beer can, the waste, the laziness, the vice. Ignorance is inexcusable where there is desire to learn, but absolute ignorance is usually the result of the vicious waste of opportunity, or of disease. Vice, the result of disease either acquired or born of tainted parentage—tainted in the sense of being physically diseased. Therefore, we must, no doubt, look to disease and its effects for a large per cent. of our misery, our poverty, ignorance and vice. The philanthropists chuck their millions at libraries, churches, universities, hospitals, etc., and as a new aspirant to philanthropy appears upon the field there looms up in his wake immense structures, solid monuments, stuffed with books, dotted with white beds or sprinkled with yearning students, all comfortably decorated with the usual red tape.

Libraries are of great benefit, yes; man should read, he should learn. Hospitals, yes; hospitals are necessary, and are sometimes quite charitable, have free beds for those who need them, even though the needy one does not belong to the same religious denomination.

Colleges, universities, yes; there are plenty of places to learn, and learn we must. Churches, great monuments to God, the minister, the philanthropist, the architect, the artist. Millions in an artistic base for a graceful spire. Poverty knocks not at its classic doors, but disease stalks therein.

Libraries, universities, churches—all of these are elevating and of individual benefit to the race; but none of them are directed in their energies to the study of the greatest propagator of vice or misery—disease.

The institution to which man must look for his emancipation from these curses is one which is armed with a few of these millions of money and earnest workers ready to battle with this greatest monster, with minds trained for the struggle and free from the cares of the existence struggle—an institution for the study of preventive medicine.

How many such institutions have we in the world? How many in this country? Endowed institutions where men of science can spend their entire time in proper study. How much relief has the world obtained from the work of men

like Pasteur, Roux, Koch! There rocks in the cradle to-day many another who can and will bring his boon to man, if the opportunity is offered him.

The world is liberally supplied with libraries, colleges, churches, etc., but it needs—ah, so woefully needs—a few millions which will give to eager and tireless scientists a moderate living, but plenty with which to pursue their investigations. Five—nay, ten—millions for the study of disease and its prevention!

GOVERNMENTAL CONTROL OF THERAPEUTIC SERA.

An article under this caption appears in the Public Health Reports for February 15, 1902, written by Past Assistant Surgeon H. D. Geddings, of the United States Marine Hospital Service. The first sentence of the article well expresses the thought embodied in the title: "In view of unfortunate results attending the use of diphtheria antitoxin in one city and vaccine virus in another, there have been numerous suggestions looking to the control of these materials and analogous products by the National government, and the propositions have received a certain amount of comment of a favorable nature." Geddings then quotes the laws in the French, German and Russian governments, where the manufacture of antitoxins is officially controlled by rigid examinations of all therapeutic sera offered for sale.

While endorsing without any qualification the government inspection of all such material, it is questionable whether the step is feasible under our present system of government. It might be possible to have the National government see to it that the municipal manufacture of antitoxins is carried on in the proper manner and that the products are scientifically tested. It is notoriously common that incompetent officials are vested with the power in many municipalities of manufacturing therapeutic sera, but it is equally well known that the most extreme care and precision is exercised by all the commercial firms engaged in this industry in this country. It is rather a sad commentary that the municipal official should be charged with incompetence, where the "commercial scientist," if the expression be permitted, is thorough and exact, yet it is nevertheless a fact, as has been proven in the recent St. Louis catastrophe. The municipal manufacture of antitoxin should certainly have a regulating factor connected with it, and that factor might well be the National government through one of its departments, notably the United States Marine Hospital Service. We would therefore suggest to this department the advisability of taking steps looking towards the control of the municipal laboratories now engaged in the manufacture of therapeutic sera, and that the commercial houses be allowed to continue in the same trustworthy, scientific manner as heretofore, without such inspection. Certainly the names of the men who have control and supervision over the commercial biologic departments throughout the country stamp their products with a degree of excellence that could not well be improved upon even by the men in the National government employ. We admit that in the countries abroad conditions are peculiarly appropriate for National control of therapeutic sera, but in these United States of America it is really questionable whether the same control would be either appropriate or practicable, save in the manner indicated.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

The Diagnosis of Inflammatory Processes Having Their Origin in the Cecum and Vermiform Appendix.—CURSCHMAN, Leipzig (*Muenchener Medicinische Wochenschrift*, Nos. 48 and 49, 1901).—In a majority of cases it is possible to differentiate between those cases of appendicitis with so-called fibrinous exudation and those with abscesses, even in those cases in which the nature of the fluctuation, the temperature curve, and the puncture fail to differentiate between them.

The non-purulent cases are characterized either by a total absence of leucocytosis or by a very slight increase of the leucocytes in the beginning, returning again to the normal. A marked increase of the leucocytes without the existence of pus occurs only in the beginning of the disease. The leucocyte count is then at the very most 20,000 to 22,000. If the leucocyte count increases in the very beginning, or gradually increases to a high figure, and other processes (pneumonia, etc.) can be excluded, it is certain that pus exists and that surgical measures are necessary. Leucocyte counts of 25,000 and over are at once suspicious. If this number remains permanent for some time, the diagnosis is certain and delay unnecessary. After the abscess has been thoroughly opened and emptied, the number of leucocytes sink rapidly to the normal. If they do not decrease, it is reasonably certain that pockets have been overlooked. A like decrease in the number of leucocytes follows a spontaneous rupture of the abscess into a hollow viscus.

The leucocyte count is by far more reliable than the temperature curve as a diagnostic aid. The temperature curve in purulent cases may vary greatly; there may be much or little fever, in fact it may be absent entirely; while the leucocyte counts show no such inconstant results.

Degeneration of the Islands of Langerhans of the Pancreas in Diabetes Mellitus.—WRIGHT and JOSLIN (*Journal of Medical Research*, November, 1901).—In the examinations of the pancreas from nine cases of diabetes mellitus, the islands of Langerhans were found involved in two. The changes were the same as those described by Opie and others, consisting essentially in the presence of a hyaline eosin-staining substance in the form of irregularly shaped masses varying in size, the larger being several times as large as an epithelial cell of the island. The hyaline masses do not seem to be continuous with the walls of the capillaries, and in very rare instances lie outside the limits of the islands. The general relations indicate that the changes occur through a transformation of the epithelial cells. The author concludes that the occurrence of marked pathological changes in the islands of Langerhans in two out of nine cases of diabetes mellitus is in favor of the hypothesis that lesions of these structures are important factors in the pathology of the disease. Further observations must determine whether the lesions will be found to be always associated with glycosuria. The history of the nine cases examined are reported here in detail.

Concerning Lumbar Hernia and Related Conditions.—BORCHARD, Berlin (*Berliner Klinische Wochenschrift*, Nos. 49 and 50, 1901).—The points at which lumbar herniæ are most frequent are (1) the triangle of Petit, (2) Lesshaft's space, and

(3) the points described by Lieber. These seem to be the points of least resistance. There are four groups of cases, viz.: those due to trauma, those following abscesses, those of spontaneous development, and those of congenital origin. According to the existing literature, the true congenital lumbar hernia is due to defective development of the ribs and abdominal muscles. It is necessary to differentiate from these the hernia-like ectasia of the abdominal walls, the herniæ spuriae, or pseudo herniæ, which are due to atrophy of the muscles.

This differentiation has a practical as well as a theoretical interest. The lumbar herniæ are properly treated through the radical operation, while ectasia of the abdominal wall must be treated conservatively. The author has collected nineteen cases of traumatic origin, nineteen of spontaneous development, five following abscesses, and ten congenital cases.

Cystic Liver.—CLEAVER (*Philadelphia Medical Journal*, December 28, 1901) reports a case of cystic liver in a man eighty-one years of age. The patient, who was rapidly declining, supposedly the result of his extreme old age, had an enlargement in the right hypochondrium, attributed to the liver. Two weeks before his death there was noticed an elevation of the surface, about the size of an egg and similar in shape, located one and a half inches to the right of the median line and about the same distance below the ribs. It was fluctuating in character and not painful to pressure. A diagnosis was made of distended gall-bladder. The post-mortem, however, showed this to be one of a number of cysts in the liver. They varied from the size of a walnut to that apparently of a base-ball. The gall-bladder contained twenty-six calculi.

A Wire Director for the Stomach Tube, with an Arrangement for Removing Particles from the End of Tube When Obstructed.—CLEMM, Darmstadt (*Muenchener Medicinische Wochenschrift*, December 10, 1901).—In view of the frequent obstruction of the end of the stomach tube by solid particles, and the incompetency of the various methods introduced for overcoming this difficulty, the author has invented a means which he considers in every way satisfactory. When the tube becomes obstructed he introduces a cup-like arrangement on the end of a copper wire, which cuts off and removes the offending particle. This avoids the necessity of having to remove and reintroduce the tube a number of times during the expression of the stomach contents or a stomach washing.

Treatment of Chronic Round Ulcer of the Stomach.—FUETTERER, Chicago (*Journal American Med. Association*, January 11, 1902), discusses various theories concerning the etiology of round ulcer of the stomach, and concludes that they can only form when there is a certain amount of hemoglobin lacking, and that it must heal when the hemoglobin percentage is increased. On this theory he bases his treatment. As soon as the diagnosis of ulcer of the stomach is made, or when it is suspected, the percentage of hemoglobin in the blood is determined. The patient is put to bed, in the care of a trained nurse. The patient then gets the juice of five pounds of beef daily, in order to bring the percentage of hemoglobin up to normal as soon as possible. The author recommends a special method of preparing the beef juice. Prepared beef extract does not give the desired result. About a pint is obtained by the method described. After the percentage of hemoglobin becomes normal, the patient gets nothing to eat for five or six days. During this time rectal-nourishing enemata are given twice daily. The results of this treatment have been gratifying. Early gastro-enterostomy is recommended in cases of stenosis of the pylorus produced by the scar of an ulcer, in order to reduce the danger of the development of carcinoma.

Gastroptosia in its Relation to Hyperchlorhydria and Tachycardia.—ROSE (*The Post-Graduate*, December, 1901) lays much stress upon the importance of

splashing sounds in the diagnosis of disturbance of motility of the stomach. Elsner's recent work, in which he undervalues this symptom, is a mass of contradictions. Splashing sounds elicited only during normal digestion, mean simple atony; those produced when digestion should be ended, mean motor insufficiency; and those produced in the mornings, before food or liquid has been ingested, indicate dilatation of the stomach. The presence of this symptom often renders the introduction of the tube unnecessary. The author reports a case of gastropnoia associated with hyperchlorhydria presenting the usual symptoms. The use of the adhesive plaster strapping and the proper diet caused the symptoms to disappear readily. Gastropnoia as a logical factor in the production of cardiac neuroses, especially tachycardia, is discussed. The author's experience is as yet too limited to enable him to give definite information on this subject. He states, however, that gastropnoia is sometimes the cause of typical paroxysmal tachycardia, and trusts that, since attention has been directed to this possibility, systematic observations will be made.

Gastric Hyperesthesia and its Management.—STOCKTON, Buffalo (*Journal American Med. Association*, January 11, 1902).—The term "hyperesthesia" is often improperly used. It should be applied to sensory states analogous to cutaneous hyperesthesia. There is a class of patients presenting symptoms resembling those of hyperchlorhydria, and yet examinations of the gastric contents prove that they are not identical. It may be found that the standard of hydrochloric acid is even below the normal. The author's observations lead him to the conclusion that there is no fixed standard of acidity. This depends in each case upon the personal equation. What appears to be the normal acidity for one is superacidity for another. In these cases it is possible to increase the tolerance of the stomach for free hydrochloric acid by merely improving the general health of the patient. It is necessary to make frequent analyses of the stomach contents. In this way the gastric activity may be kept at the highest point compatible with comfortable digestion and within the limit of gastric tolerance. In the treatment of these cases the diet is of prime importance. Beginning with a very bland diet, it should be gradually expanded up to the point of toleration. Antacids are very useful. The continuous and faradic currents also give happy results in the treatment of gastric hyperesthesia.

Movable or Floating Kidney a Cause of Acute and Chronic Painful Dyspepsia.—MACGREGOR, London (*Lancet*, December 14, 1901).—The systematic examination of the abdomen in cases of chronic painful indigestion, especially in women, will frequently show that the trouble is not in the stomach itself, but that the disturbance is due to the wanderings of a dislocated kidney. So long as there is no interference with the functions of the kidney itself, no symptoms point directly to nephropnoia. A movable kidney may produce a variety of symptoms. In one of the cases here reported an acute attack of jaundice, with sickness and severe pain in the epigastrium, was produced; in another it produced symptoms simulating cancer of the stomach, viz.: pain in the region of the pylorus, emaciation, an icteric tint of the skin, etc. The great frequency of movable kidney is attributable to tight lacing plus muscular effort. Cases are cited in which muscular exertion while tightly laced precipitated gastric disturbances afterwards found due to movable kidneys.

A History of the After-Progress of Five Cases of Partial Gastrectomy for Cancer of the Pylorus.—MORISON (*Lancet*, January 11, 1902).—CASE I.—A woman, forty years of age, lived three years and two months after the first operation, a pylorotomy.

CASE II.—A male, forty-eight years of age, survived two years and two months after the operation

CASE III.—A woman, aged forty-one years, died one year and three months after the pylorotomy was performed.

CASE IV.—A male, aged thirty-eight years, lived two years and eleven months.

CASE V.—A male, forty-one years of age, lived but six months.

Tumor of Hair, Weighing One Pound Seven Ounces, Two Feet in Length, Removed from the Stomach of a Woman, with Recovery.—BRUCE (*The Canadian Practitioner and Review*, November, 1901) reports a case of a hair tumor in the stomach of a woman twenty-six years of age. It was first noticed during pregnancy, and was supposed to have some connection with the uterus. After labor the tumor was found to lie in the upper part of the abdomen, being about twelve inches in length. Tumor of the spleen, stomach, omentum or kidney was considered among the possibilities. It could be moved up or down and from side to side, and was quite hard. Aside from the patient's knowledge of its presence, the tumor had caused no symptoms. She had never even been nauseated, and had a good appetite throughout. An exploratory incision was made, and the mass removed through an incision four inches long in the stomach. The tumor was found to consist entirely of hair, twisted and intimately woven, and was exactly the same shade as that of the patient. Single hairs were dissected out twelve inches in length. The mass was twenty-four inches long. The patient claimed that she had never swallowed her hair. Though she was not hysterical, the author has no doubt but that she swallowed it.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Twenty-five Cases of Gastro-Enterostomy for Non-Cancerous Affections of the Stomach Susceptible of Cure by this Means.—PANTALONI (*Archives Provinciales de Chirurgie*, November, 1901).—This series is remarkable for the fact that only one of the patients was lost, and this was, as we are assured, not the fault of the surgical procedure. The operation done was that of Roux, the "Y" operation; and, as the inventor of it claims, it is the only one to be chosen where the patient can stand a slightly longer operation than the others, it being the only one which can fully re-establish the function of the stomach. Twenty-four of this series of patients not only recovered, but more can be said—they actually have no stomach symptoms from their former benign stenosis; a fact for which the method deserves all the credit (the "Y" method). Pantaloni enters a vigorous plea for the same care in anatomical observation of the stomach and surrounding tissues during operation that is bestowed upon the uterus and adnexæ; by this means alone can we gain the same definite indications for operation and consequently the same operative results which the surgery of the female genital organs now furnishes. The splendid article closes with the full histories of all the author's twenty-five cases.

Mechanical vs. Suture Methods for Intestinal Anastomosis.—FRANK (*Annals of Surgery*, January, 1902).—A number of separate points are mentioned in proof of the superiority of the Murphy and Frank couplers over other forms of intestinal anastomosis. Such an operation is said to be more simple, time is saved, peritoneal surfaces are uniformly coapted, hemorrhage is arrested by the button, the scar does not contract unduly, less danger of infecting peritoneum at time of

operation, not much shelving, reduction of mortality, and not so many adhesions in vicinity. Many of the disadvantages to which others have called attention in this connection are left unmentioned by our author.

Symptoms and Therapeutics of Cervical Ribs.—BORCHARDT (*Berliner Klinische Wochenschrift*, December 23, 1901).—There are but two cases in the literature, which relate the occurrence of two such supernumerary ribs on one side. Four types are described, according to the extent of the new body: the author's four cases belonged to the most frequent kind, that in which the rib ends free or unites with the ordinary rib. We are interested in this structure especially on account of its intimate relation to the brachial plexus and the subclavian artery, though it must be said that it causes no symptoms, in *most* cases, in spite of its delicate situation. In five per cent. to ten per cent. of all cases, however, there exists a typical symptomatic picture, consisting of the peculiar finding on the neck, disturbance in circulation and characteristic nerve derangement. The rib can be felt and seen in a radiograph. The circulation is disturbed in the following manner: The subclavian cannot let enough blood through, so the pulse grows less and the arm white, especially marked when inspiration occurs, because the vessel is compressed by the rib at this time. Finally, the vessel develops an aneurism or becomes thrombosed.

The nerve disturbances cause the patient most suffering, however. There are neuralgic pains, various hyperesthesias, ataxia, and degeneration. All these symptoms may develop slowly and without known cause, or they may be first noticed after an injury, and from the day of the same grow worse. Death has occurred in no case, and the circulatory disturbance may be helped in the usual ways; but for the nerve trouble so much cannot be said. Only sixteen such cases have been operated upon, four in the Bergmann clinic, and of them three with brilliant result.

Spasmodic Torticollis and Its Surgical Treatment.—HAMANN (*Buffalo Medical Journal*, December, 1901).—The author says that the disease which may commence in the sterno-mastoid of one side finally can spread to all the posterior muscles of one or both sides. Indeed, any portion of the motor apparatus of face, neck or arm may become affected. An interesting feature of the malady is that it comes in a group of muscles which have been overused in a certain way. For instance, a locomotive fireman contracted the disease on the left side, after turning his head constantly to the left for years. Section of muscles involved and of the nerves supplying them is the only remedy which offers hope of a cure. Bilateral section of muscles does not interfere with turning the head or holding it erect. Two successful cases are reported.

A Case of Myositis Ossificans at the Neveau of an Amputation Stump.—KATZ (*Le Progres Medical*, No. 33, 1901) relates a case which from its extreme rarity becomes doubly interesting. After an amputation for accidental injury to the leg the stump became so sensitive that a neuroma was suspected. Six months after the operation an examination of the part was absolutely impossible, so intolerable was the pain provoked by the slightest pressure. At the most sensitive spot there was noticed a hard plaque which gradually increased in size until not a trace of soft tissue could be found at the end of the stump. In this mass the end of the bone seemed to lose itself, but on the operating-table was found to be separate and distinct from it. The author leaves it an open question whether or not shreds of periosteum left in the wound produced the growth, or whether the case is one of true myositis ossificans such as is seen after rupture of a muscle, etc.

The Technique of Gall-Bladder and Duct Operations.—MIXTER (*Annals of Surgery*, January, 1902).—He compares the indications, in pain and other symptoms, around the gall-bladder to those around the appendix. Drainage should be instituted in every bladder that has been opened, unless it be removed. This is done by Mixer by placing a flanged glass tube in the gall-bladder* and tying a string around it, the whole being packed around. A rubber tube is now inserted and the contents drawn off continuously into a container beneath the bed.

When the ducts are opened the author does not advocate primary suture—still he says the Halsted hammers will be of great aid to one who attempts it. He uses the Murphy button in those cases which require that an anastomosis be made between colon and gall-bladder.

Pre-Oral Intubation.—KUHN (*Centralblatt fuer Chirurgie*, December 28, 1901).—The author's main idea seems to be to furnish more than the usual quantity of air to the patient than he would otherwise gain when going badly in narcosis. Again we are often in the need of help in many operations on tumors on the neck, etc., when the air passages may be compressed or displaced. The author takes up next a description of the instruments which he has used in this connection, the chief of which is a flexible metal tube. This can be cleaned during the narcosis in much the same way as is the tracheotomy tube. The three chief indications for the operation are: in thyroid extirpation, in cases where blood and other fluids must be kept from running into the larynx, and in cases that require air to be blown directly into the lungs in order that a patient who no longer breathes may be revived.

Treatment of Prolapse of the Rectum.—A. E. HALSTEAD (*Medical Sentinel*, November, 1901).—The article opens with description of the four forms of the disease. In acute or recurring prolapse, reposition can be accomplished unless strangulation has occurred; then amputation must be done. In other chronic cases ventro-fixation can be of much avail. The author takes up in detail the technique of these two operations, and gives in a concise manner the indications for each.

He has operated on six cases of his own with successful outcome. In two he did a Whitehead operation, in one removed a polyp, in two ventro-fixation, and in one other made a complete amputation. The various authorities have been liberally quoted, with a result that the article is rich in information contained.

Sudden Dislocation of the Hip in the Course of Acute Rheumatism.—GEVAERT (*Journal de Chirurgie et Annals de la Societe Belge de Chirurgie*, No. 11, 1901).—Collection of fluid in the joint cavity as well as relaxation of the muscles and tendons around the same are responsible for the accident. They can reduce themselves spontaneously and may remain in place. No subjective symptoms occur and the trouble is noticed only when the part is viewed. The more recent the dislocation the better the definite prognosis; and indeed it may be said that the prognosis is better in this complication of typhoid than it is in rheumatism, for in the latter disease there is a pathological process going on in the joint, hence the formation of new deposit in the cavity is rendered easy and rapid.

Although the prognosis, as far as topography is concerned, is good, still the author has seen bad final functional results, for the reason just stated. In a case reported he succeeded in replacing the part sixteen months after the accident, and obtained a favorable result as far as function is concerned.

The Cause of Stitch Abscesses and Their Prevention.—MAYLARD (*Annals of Surgery*, January, 1902).—The author's experiments have shown that the skin, on which approved sterilization has been attempted, will still infect culture tubes most liberally. This was accomplished by squeezing out the contents of sebaceous

and sweat glands. We must look for infection from such a source at the wound edges or along the course of stitches. The first can, in a measure, be obviated by accurate coaptation and the obliteration of dead spaces; but as to the latter, by rubbing in oleate of mercury, Maylard managed either to sterilize or retard germ growth in a number of skin specimens, hence concludes that stitch abscesses can be prevented by rendering aseptic by inunction deep skin layers that must otherwise escape our efforts. Clinical experience justified his belief.

Permanent Results of Intestinal Exclusion.—WIESINGER (*Deutsche Zeitschrift fuer Chirurgie*, Bd. 62, Hft. 1 und 2).—Two cases are reported, the same being, on account of their age, of particular interest, the two having been operated upon six years before. The first was a tuberculous tumefaction of the cecum, with fistula; but after the exclusion the patient gained rapidly, and now considers herself cured. There is still a little mucus coming from the fistula, but it gives her no trouble.

The second case was one on which the operation had been done for chronic colitis. In this case a fistula was made for therapeutic purposes; it closed, however, after six weeks, leaving the individual in a most satisfactory state, which still continues at the time of writing. Experiments have shown that complete exclusion is dangerous and likely to burst open; still there has existed the unique condition of complete exclusion in this last-named patient for six years. This possibility is explained by our author by the fact that a fistula existed for six weeks after the operation, and that mucous secretion had so diminished before the spontaneous closure of the same as to be no longer a matter of danger.

Intestinal Perforation Following Strangulated Hernia; Peritonitis; Operation; Recovery.—MORESTIN (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, Tome 28, No. 1).—This terrible accident occurred as a result of taxis, so the author makes this subject the lesson of the hour. Until it becomes the rule to operate at once on strangulated cases, we will continue to see the various misfortunes which make this disease so dangerous. In the case reported, a man had suffered forty-eight hours and then called in a doctor, who reduced the mass with great force. In a short time there appeared the symptoms of peritonitis, and at a hurried operation the perforated gut was sutured, then the cavity packed. The patient made a satisfactory recovery in spite of his condition. Two more cases were referred to, of which one recovered and the other died; however, the author concludes that far the greater majority of such patients are certainly lost. The perforation may be the direct result of the taxis practiced on a gut whose vitality has been impaired, or one may reduce by force an intestine in which perforation has already occurred. However that may be, the result is equally bad in the two cases.

Hepatic Drainage.—DEAVER (*Philadelphia Medical Journal*, December 21, 1901).—The pathology of gall-stone disease closely resembles that of appendicitis. The initial step is a catarrh of the bladder or ducts, and the disease may not be suspected until the patient is far advanced in it. The disease has a tendency to progress rather than to become self-limiting, and when symptoms do occur finally, they are the result of adhesions around the small viscus, or else the result of defective drainage; hence, our success in treating the disease is directly proportionate to the success we may have in making effective drainage. Operations must be done early, for if such patients are neglected they become icteric, and are then exposed to great danger, no matter what the manner of procedure. If there be any serious change in the gall-bladder, it is to be removed; hence, it is seen that not only the pathology of the disease can be likened to appendicitis, but the treatment, if it is to be effective, likens itself to that of appendicitis as well.

A Case of Partial Resection of the Spleen With Use of Steam as a Hemostatic.—SNEGUIREFF (*Archiv. fuer Klinische Chirurgie*, Bd. 65, Heft 2).—Experiments on animals have resulted to the author's satisfaction, and led him to try the above named method on the human. He uses a sort of distributor of the steam instead of the direct jet, in most cases, as the force of the latter washes out the pulp from between the more resistant portions of the organ. In this manner all the bleeding which he encountered during the resection was immediately checked except that which came from two central vessels of about the size of the radial artery; on them he was forced to turn the direct jet, when they at once ceased to bleed. Pressure with the hand as well as gauze tampon had proven insufficient to quiet them. After the resection the spleen was fixed to the abdominal wall, and the tumor found to be an angioma cavernosum. The patient made a perfect recovery.

Retro-Peritoneal Hematoma; Laparotomy; Recovery.—PAUCHET (*Gazette des Hopitaux*, January 9, 1902).—When an injury to the abdomen affects the region above the umbilicus, the surgeon usually contents himself with an exploration of the stomach, liver and biliary passages. This is often insufficient, as the following case proves. The patient had been a sufferer from obscure abdominal trouble for two or three years, and presented a mass between stomach and colon, the same being free from liver and spleen. The tumor could be seen to increase in size day by day, so an abdominal section was determined upon. At the operation there was found a large quantity of blood, filling the lesser peritoneal sack; after this had been cleaned out a spurting vessel was discovered, but this stopped upon pressure for a few minutes. In concluding, the author makes a few remarks on the pathology and diagnosis of hemorrhage, of which he considers this case an example.

A History of the After-Progress of Five Cases of Partial Gastrectomy for Cancer of the Pylorus.—MORISON (*The Lancet*, January 11, 1902).—The first operation was done in October, 1897, and the patient remained well till May, 1900, when digestive symptoms commenced. A tumor was felt and a second laparotomy performed. However, the case proved inoperable this time, and the woman died in December following, three years and two months after the first operation. The second patient was operated upon in September, 1898; he remained perfectly well until February, 1900, when his old symptoms recurred and he died in November of the same year; that is at the expiration of two years and two months after operation. Patient No. 3 lived but one year and three months after her pylorus was removed. No. 4, two years and eleven months after the same procedure, and No. 5 expired six months after the attempt to prolong or save his life. The report can be pronounced very favorable to the author's skill and judgment, when we take into consideration the nature and course of the disease if left to itself and unchecked.

THERAPEUTICS.

IN CHARGE OF

WALTER BAUMGARTEN, M. D.

Serum Therapy of Typhoid Fever.—CHAUTEMESSE (*Presse Medicale*, November 20, 1901).—Chautemesse reports the results of the employment of the anti-typhoid serum, the method of production of which he published in 1898 at the Congress at Madrid. From January 1st to October 10, 1901, he employed it in

one hundred cases of typhoid fever, in Paris hospitals, choosing by preference severe cases, with a fatal result in six cases, a mortality of six per cent. He contrasts this with the total mortality of twenty-nine per cent. in 371 cases, treated in Paris by routine methods, and occurring during the same period (January 1 to October 10, 1901) as his own cases, and attributes the difference to the efficacy of the serum.

The injection of the serum is followed by a more or less prompt fall in the temperature. This, however, depends greatly upon the previous duration of the disease, the severity of the infection, the resistance of the patient, and the dose of the serum. Granting that the dose of serum be adequate, the number of days the disease has existed forms the best index for its course after injection. Injections on or before the seventh day are followed within four or five days by a fall of temperature to normal, a coincident improvement in the rate and character of the pulse and in the general well-being of the patient. After the eighth day the typhoid bacilli have too firm a hold, and the effect of the serum is usually greatly delayed; the temperature remains high for several days, drops slowly, and remains slightly above normal for some time; pulse and general condition improve with the fall in the fever, but do not become normal; so that in severe intoxications it may be necessary to repeat the injection before the desired effect is produced.

When the serum has been employed late in the disease, relapses, or at least recrudescence of the fever, may occur, and are to be carefully guarded against. The explanation of these relapses lies in the fact that the patient has not developed his own antitoxine, and has only partially resisted the disease by means of the serum which in time (eight to twelve days) is excreted. The bacilli which have resisted the action of the serum and prolonged the disease are presumably the most virulent, and provoke a relapse, which may be considerably more severe than the original fever. Such a relapse should be promptly met with a second injection before the fever reaches its fastigium.

The length of the fever, therefore, is greatly shortened by the serum, and depends largely upon how early in the disease the serum treatment is instituted.

The effect of the serum in the general condition appears in twenty-four to thirty-six hours, and consists in a disappearance of the headache, in a feeling of well-being, and a better color. Diarrhea usually disappears in two or three days after the injection. Changes in the pulse follow the effect on the temperature. In cases which are treated very early in the disease, the pulse-rate may fall abruptly to sixty or fifty-five per minute. The blood pressure may rise from 120 to 130 mm. (of mercury) before the injection to 170 to 180 mm. three or four days after the injection. The action of the serum on the temperature depends on the severity of the infection. In mild cases a moderate rise of temperature, a few hours in duration, follows the injection, after which it steadily declines. When the infection is severe and general, the serum causes a rapid destruction of a great number of organisms, the substance of whose bodies throws a great mass of toxic material into the circulation, which maintains or increases the fever for a number of days. This should be controlled by the systematic employment of the cold bath.

The urine increases in quantity almost immediately after the injection of serum, and may reach a daily output of three to four liters. The chlorides of the urine do not, however, increase to normal quantity until convalescence is established. Febrile albuminuria gradually disappears; the serum itself never causes it. The blood changes immediately after injection consist in a leucocytosis, with a diminution and disappearance of myelocytes, a reappearance of eosinophiles, and an increase in mononuclear leucocytes; in time the leucocytes resume their normal proportion.

The complications observed in this series of cases may be tabulated as follows: three cases of intestinal hemorrhage, all of which recovered; one case of

perforation, which died; three cases of otitis media, which recovered; two cases of slight phlebitis of the saphenous vein, which recovered; one case of pneumonia, which died.

The injection of the serum is neither painful nor irritating. The point of election for the injection is in the forearm near the bend of the elbow, and is chosen on the ground that the venous network is better developed in this region and the serum is, therefore, more rapidly absorbed. Care should be taken not to introduce the needle into a vein. In the 100 cases on which this report is based the only sequel of the injection was a slight erythema without increase in the fever, in two instances.

In the early stages of the disease, from the eighth to the twelfth day, the quantity of serum to be injected is ten to twelve c.c. in robust individuals. If after eight to ten days the temperature remains stationary and slightly elevated, or shows a tendency to rise, a second injection of four to five c.c. may be given; should a relapse occur, the dose of the injection must be determined by the height of the fever and the general intensity of the reinfection, provided twelve c.c. be taken as a maximum dose. The initial dose of ten to twelve c.c. may be reduced under the following conditions: (1) When a case is seen within the first five or six days; (2) when it is seen later in the disease or when the intoxication is profound. In the second instance, to avoid greatly increasing the toxins in the blood, injections of six to eight c.c. may be made and repeated at intervals of a few days. The effect of the serum on the temperature should always be very closely watched.

On the Action of Digitalis.—CUSHNY (*Medical News*, January 11, 1902).—Cushny before entering upon his subject proper, gives the following brief history of the use of digitalis and investigations into its action until the last ten years. Digitalis was discovered by Withering, of Birmingham (England), in 1785, who applied it in cases of dropsy, which he failed to recognize as of distinctly cardiac origin, but clearly differentiated from what appears to have been cases of ovarian cyst, in which, he says, digitalis is of little avail. Digitalis became rapidly popular, and in 1830 its chief usefulness was definitely shown to be in cases of cardiac disease. Traube in 1851 studied its effect on the heart and circulation in experiments on mammals, which yielded two results proving (1) the slowing of the pulse, and (2) the rise in the blood pressure. The slowed pulse is due to increased activity of the inhibitory center in the medulla; the increased blood pressure is due in part to an increase in the amount of blood expelled from the heart, in part to contraction of the peripheral vessels, which obstructs the flow of blood from the larger vessels into the capillaries. It was also shown that it is questionable whether digitalis produces any contraction of the pulmonary arterioles. In working on the active principles of digitalis, Schmiedeberg, in 1882, found three bodies which acted on the heart in the same way as digitalis, and which he named digitoxin, digitalin and digitalein; other inactive bodies accompanied these three, one of which he named digitonin. Recently Kiliani described a fourth body, digitophyllin, which resembles digitoxin, and showed, further, that all the active principles of digitalis belong to the group of glucosides.

The slow pulse and the increase in blood pressure obtained by the manometric methods instituted by Traube are also frequently obtained after administration of drugs such as strychnia and caffeine. By various recent methods, therapeutic doses of digitals have been shown to be followed by slowing of the heart, an increase in the strength of its contractions, and an increase in the dilatation of its ventricles. The slow pulse is not due to a direct action upon the heart, for it disappears when the cardio-inhibitory center is paralyzed by atropine. The increased dilatation of the heart—that is, the greater relaxation of its muscle fibers—also proves to be due to the action of the cardio-inhibitory center, and likewise dis-

appears when this is thrown out of action by atropine. The only feature which remains is the increased strength of contraction, which is, therefore, a direct action of digitalis on the heart muscle. Such increased strength of contraction tends to make the cavities of the heart smaller than before—that is, to drive out more blood.

One might suppose that this increased output of blood at each contraction would be counter-balanced by the reduced frequency of the beats, so that no more blood would be driven out per minute than previous to the administration of digitalis. But direct experiment has shown that the increase in efficiency amounts to from twenty to thirty per cent. in normal animals. When larger quantities of the drug are given, and poisoning is produced, the output falls below the degree of efficiency existing before the drug was given. Investigations on hearts isolated from the body and fed mechanically, and therefore severed from the cardio-inhibitory center, have shown that the only effect of digitalis is an increase in the strength of contraction.

The essential disturbance in cardiac disease is a more or less serious interference in the ability of the heart to move an adequate quantity of blood in a given time from the veins to the arteries. The accumulation of blood on the venous side of the circulation leads to starvation of the tissues and organs of the body, the heart itself included, so that the inefficiency of the heart leads to its own malnutrition, and this to its further loss of strength, and in this manner forming a vicious circle. "The effects of digitalis on the heart muscle are exactly those adapted to counteract this condition. The contraction is increased in strength, and probably the dilatation is slightly increased in diastole, although this is much less marked in the dilated heart than in the normal one. The increased contraction augments the output of the heart, and raises the pressure in the arteries, thus accelerating the flow through the capillaries." "The quickened circulation supplies a more adequate supply of food and oxygen, and improves the nutrition of the vessels and organs, and chief among these of the heart itself, which becomes equal to its task." Where the heart is permanently injured by a shrunken valve, "the heart muscle has a special burden to carry in order to maintain equilibrium, and increases in bulk. The hypertrophy of a muscle can occur only when it is put in the most favorable conditions of nutrition, and the hypertrophy of the heart is induced not through any direct stimulation of the growth of the muscle by digitalis, but by its nutrition being improved by the changes in the circulation which are sufficiently explained by the increased contraction of the muscle fibers."

The improved nutrition of the heart in cases of dilatation and malnutrition, after digitalis has been given, favors the return of the rapid pulse-rate to normal, as well as the direct action of digitalis itself.

Digitalis acts directly upon the heart in increasing its regularity, as has been proved by Gottlieb on an excised heart with a constant source of nutrition, so that neither cardio-inhibitory center nor nutrition came into question.

The contraction of the arterioles produced by digitalis may tend to keep more blood on the arterial side, and undoubtedly aids the action on the heart in cardiac inefficiency. Cushny thinks that this may justify the persistence of the profession in the use of digitalis in preference to strophanthus, which has the same action minus the contraction of the arterioles.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

A New Method of Staining Nervous Tissue.—T. KODIS (*Archiv. fuer Mikroskopische Anatomie und Entwicklungsgeschichte*, Bd. 59, Heft 2, issued November, 1901).—T. Kodis has given us, in his new method of staining, a promise of a better knowledge of the microscopic anatomy of the nervous system than we now have. He states in the beginning of his article that the Golgi method of staining nervous tissue depends for its action upon the affinity which exists between silver and mercury salts and nervous elements. In other words, a chemical union is formed between the metallic salts in question and the albuminous body of the nervous tissue. The question arose in Kodis' mind whether this reaction could not be brought about more quickly than obtains in the case of the following out of the technique of the Golgi stain. He tried several salts, and finally arrived at the conclusion that mercuric cyanide, $\text{Hg}(\text{CN})_2$, was the ideal salt for this work, being a fixing and penetrating agent at one and the same time. The next question was to find a suitable staining agent to be used in connection with this fixing material. Delafield's, Ehrlich's, Boehmer's, Meyer's and Apathy's hematoxylin, acid fuchsin, carbolfuchsin, gentian violet, anilin oil-gentian violet, methyl violet, methylene and anilin blue solutions, etc., were all tried without success. Some good pictures were obtained with polychrome methylene blue. Molybdic acid-hematoxylin was found to be the quickest and best agent for demonstrating the integral parts of the nervous tissue after preliminary fixation in the mercuric cyanide solution. The technique must be changed to bring out different parts of the nervous tissue, but for the general demonstration of the gray matter of the brain, for instance, the staining of the ganglion cells, the following technique should be carried out:

1. Fresh material (not older than twenty-four hours after death) is cut into pieces one-half to one centimeter thick, and immersed in a saturated watery solution of mercuric cyanide for from one to two days, often for a longer period.

2. The pieces are put directly into 10 per cent. formol solution, one to three days, without washing off the mercuric cyanide solution.

3. Sections are cut with the freezing microtome.

4. Stain the sections one to two minutes in molybdic acid-hematoxylin of one-fourth the strength of the prepared solution. Molybdic acid-hematoxylin is prepared in the following way:

R Hematoxylin crystals	1.0 grammes
Pure molybdic acid anhydrit. (Merck)	1.5 "
Aqua dest	100.0 "
H_2O_2 or a crystal of HgO	0.5 "

Sig.—This solution can be used on the day following its preparation.

5. Wash in water one to two minutes.

6. Contrast stain with alcoholic solution of light green.

7. Absolute alcohol, xylol, Canada balsam.

The protoplasm of the ganglion cells is stained gentian violet; the dendritic processes and the beginning of the axis cylinders likewise, the smallest branches blue violet. Usually the nuclei are not at all stained or appear darker than the protoplasm. In the contrast stain the nucleus appears green, while the smallest branches look greenish.

The neuroglia fibers of the white matter appear reddish, the nuclei of the neuroglia cells are dark red, while the protoplasm is not stained or is stained green. The neuroglia fibers of the gray matter are not stained, while the neu-

roglia neuclei are stained red. In paralytic subjects, so far as Kodis has studied, he has found that the neuroglial fibers of the gray matter are stained, especially in the stratum zonale, where in normal brains they are to be seen.

The axones are stained violet as far as the myelin sheaths. The myelin sheaths are not stained. If one can procure very fresh human or animal brain matter, it will be found that the axones of the white matter are stained also.

If it is desired to imbed the sections in paraffin or celloidin, it is best to stain *en masse*, as alcohol changes the staining character of the tissue and injures the finest branches of the dendritic processes. For this purpose use small pieces, two to three millimeters thick, and put them two or three days in 1:20 solution of the molybdic acid-hematoxylin, or, still better, in Mallory's phosphormolybdic acid-hematoxylin, 1:20 solution. Then place the section directly in alcohol, and, after hardening in the usual way, in celloidin or paraffin. The staining agent does not penetrate deeply, yet many good sections can be obtained in this way. The phosphormolybdic acid-hematoxylin gives good polychrome-staining pictures. The nuclei are mostly blue, the protoplasm a light red, the smallest branches violet, and the Nissl bodies are unstained. The pigment of the ganglion cells assumes an orange-red color. The chromatin substance on the nucleus is plainly visible. The nucleolus, and very often the nucleolulus, are blue. Pieces of spinal cord which have been fixed in the cyanide of mercury and stained *en masse* in the Mallory solution, show the ganglion cells stained with their dendrites a burgundy red, the axones a lighter red, the myelin sheaths light blue, the neuroglia fibers dark red. In general it can be said that the peripheral parts of the specimens with which the stain comes readily in contact are stained red, while the central parts, which are not so accessible to the stain, are colored blue.

Isolated parts of the spinal cord can be stained very well if the tissue is fixed in the way described, cut with the freezing microtome and stained with the Haidenhain ferric-hematoxylin. The procedure is carried out in the following way:

1. The sections are put for two to five hours in two per cent. iron-alum solution.
2. Wash in water.
3. One-half per cent. watery hematoxylin solution, ten to twelve hours.
4. Treatment in two per cent. iron-alum solution one to three hours, under microscopic control, until the tissue is decolorized and only the remains stained dark blue.
5. Wash for several hours in water.
6. Alcohol, xylol, Canada balsam.

The methods of staining for the ganglion cells and the nerve sheath can be combined, first by staining with the Haidenhain procedure, and then with the molybdic acid-hematoxylin.

Fibers containing no marrow are stained heavier, and up to this time Kodis has found no isolated stain for them. They can easily be stained, but other tissue elements are stained with them, and that destroys the picture. Pieces of tissue are cut with the freezing microtome and the sections are put into diluted and slightly warmed molybdic acid-hematoxylin for from one to two minutes. The sections are stained completely dark or black red. For decolorizing they should be put in two to four per cent. iron-alum for from two to three hours, until the color of the sections becomes light red. Then follows thorough washing in water and the usual after-treatment. The finest fibers are brought out in this way; for example, those of the submucosa and mucosa.

The Golgi methods and their modifications have the greatest significance in the progress which has been made in studying the microscopic structure of the brain. Relatively speaking, they have not had much of an influence on the progress of pathologic findings in the brain. Inasmuch as they stain only certain parts, it is not possible to get a composite picture of the anatomy of the

brain from one staining process. Each process brings out certain units. We must make a number of preparations in order to bring out the fully complete picture. We must make a composite picture from the sum of the units thus brought out. We never know positively, in the face of a pathologic condition of the brain elements, just what the changes are, for the reason above given. That it is also impossible in some cases to recognize artificial appearances, we also know. Kodis trusts that his method will help alleviate these defects in our technique, because he believes that with this technique we can obtain a positive picture of the changes in brain tissue, not an elective one.

The Pathology of the Adrenals.—ERNST ROSENSTEIN (*Arbeiten aus dem Path. Anatom. Institut zu Posen*, 1901).—Rosenstein made a series of observations on the adrenal bodies in one hundred post-mortem examinations conducted at the pathologic institute in Posen. He noted that cavity formation was present quite often—in thirty cases out of the total one hundred observed. The cases in which the cavities occurred were tuberculosis, pneumonia, severe degrees of arterio-sclerosis, heart lesions, and cases in which there was a stagnation of blood in the lower abdominal organs. He concludes that this cavity formation in the adrenal bodies is not a post-mortem change, nor is it an evidence of putrefaction, because it occurs in cases that are opened up shortly after death, and in cases in which there are no other evidences of putrefaction. The cavities are the result of stagnation of blood in the circulatory system, particularly in the lower abdomen; especially in connection with an inflammatory condition on the borderline between the cortical and medullary portions of the suprarenal capsule. These inflammatory changes in the suprarenal capsule are either of an exudative or of a productive variety.

Another group of cases studied by Rosenstein were Addison's disease, clinically and pathologically. He noted in the first case of Addison's disease which came to autopsy tuberculosis of the lungs, thickening of the plexus solaris and adhesions between it and the suprarenal capsule. The adrenal was also caseous, and the right was in the same condition—adherent to the vena cava.

The second case showed on post-mortem examination caseation of the left suprarenal capsule, the right one showing more calcification than caseation. The heart was in brown atrophy; slaty induration of the lungs and tuberculosis of the bronchial and tracheo-bronchial lymph nodes. There was no involvement of the solar plexus, as in the first case. A third case showed about the same picture as the second. In a fourth case total caseation of the suprarenal capsule was observed, although no clinical signs of the Morbus Addison were noted on account of the severe tuberculosis which overshadowed everything. A fifth case was found to have intestinal and pulmonary tuberculosis with caseous nodes in both adrenals.

Rosenstein follows out the postulate of Lubarsch, in believing that the bronze skin is not necessarily a symptom of Addison's disease; that we can have the pathologic-anatomic signs of Addison's disease in the adrenals without having had the clinical picture of *diabete bronze*; that, in short, the pathologic-anatomic designation for this affection should be that devised by Lubarsch, namely, "cachexia hypernephropriva."

Serotherapy of Typhoid Fever.—CHANTEMESSE (*La Presse Medicale*, November 20, 1901).—Chantemesse is one of the pioneers in the serotherapy of typhoid fever. He began his investigations in 1892, together with Widal. His first results were entirely negative, for the reason that the immunization of animals was made with living or dead cultures of the bacillus typhosus. The consequence was that a protective agent was obtained, but not a curative one. In 1898, Chantemesse reported at the congress of medicine in Madrid his success in obtaining a soluble active toxin of the bacillus typhosus. As a result he succeeded

in manufacturing a potent antitoxin which, he claims, has marked curative effects on the disease enteric fever.

In this article he reports a number of cases successfully treated in the Paris hospitals by means of this antitoxin of typhoid fever. Cold baths were employed at the same time. He says that the effects of the serum are the same in man as they are in the lower experimental animals, viz., an increase in the phagocytic power of the blood, with a destruction of the microbic life present. It reduces the fever and exercises a marked remedial effect on the severity of the nervous symptoms. Chantemesse insists that the cold water treatment should be used coincidentally, that water should be imbibed in abundance in order to flush out the kidneys, etc.

The report is the most enthusiastic one that has yet been presented in regard to the serum therapy of typhoid fever. The clinical histories appended with the article seem to confirm the promising words of the essayist. It certainly offers an incentive for others to follow along the same lines.

The Occurrence and Habitat of *Anopheles Punctipennis* and *Anopheles Maculipennis* in the Valley of the Androscoggin.—EDWIN O. JORDAN (*The Journal of Medical Research*, January, 1902).—Jordan states that the attempt to prevent malarial infection by combating the particular kind of mosquito that forms the intermediate host of the malarial parasite is not likely to meet with even moderate success unless fortified by a complete knowledge of the development and ecology of the various members of the incriminated genus. One of the most hopeful measures for diminishing malaria lies in the discovery and reproduction of the natural conditions hostile to anopheles. These conditions must exist, else anopheles would be more generally distributed than it is. The notes taken by Jordan during one summer's observations are recorded by him in the hope that they may be found useful in further comparative studies.

His historical note shows that malaria began in New England, in the southern part, and has gradually extended northward. The extreme northern part of New England has escaped this disease. The observations made by Jordan took place in the neighborhood of the town of Shelburne, New Hampshire, in the valley of the Androscoggin river, and near the Maine border.

Very few winged insects belonging to the genus anopheles were found during the entire season. The adult anopheles was never found in the neighborhood of its breeding place. The house occupied by the writer was the object of special search, since most species of the anopheles are semi-domestic and tend to congregate in dwellings. In the course of the whole season only six specimens of the anopheles punctipennis were captured in and about the house as against seventy-four specimens of culex.

The larvæ of anopheles were also observed by Jordan. The larvæ were collected in the outfit recommended by Nuttall, Cobbett and Strangeways-Pigg, consisting of a white enameled dipper of 600 c.c. capacity, a wide-mouthed pipette and collecting bottles. At Shelburne the anopheles larvæ were so scarce that only one was found in about twenty dips. The other extreme was at Randolph, where as many as twenty-one anopheles larvæ were found per dip. Although freshly reared female anopheles were confined in breeding jars under what appeared to be favorable conditions and were fed with human blood, bananas and blueberries, they did not lay eggs in captivity. Very young larvæ died before reaching the pupal stage. The older larvæ behaved better, and some developed into pupæ and hatched. Thirty larvæ and pupæ of anopheles punctipennis collected at intervals throughout the season gave birth to eleven male and nineteen female adults.

The anopheles are surface-feeders and derive their sustenance from the plankton. In this respect they differ from the culex larvæ, which are able to browse over the bottom and get their food in large part from the bottom ooze, as

well as from the floating life. It is no accident, therefore, that malaria has been observed to prevail along river bottoms and sea coasts. Accumulations of surface water are not apt to be the breeding places for anopheles larvæ, for the reason that there is insufficient nutrition. For genera able to range more freely in their search for food than the anopheles larvæ, such places are good breeding places.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Amputation of the Cervix; Injurious Consequences of This Operation.—M. GRAEFE (*Muenchner Med. Wochenschr.*, No. 22, 1901).—Graefe considers this operation really indicated in comparatively few cases only. The most frequent untoward symptoms met with subsequent to this procedure are the following: (1) Ectropium of the mucosa of the cervix, later inflammation and ulceration; (2) stenosis of the external os, producing delay during parturition, dysmenorrhea or sterility; (3) excessive reduction in the size of the cervix, predisposing to a retrodeviation of the uterus; (4) parametritis and perimetritis posterior in cases where sutures were passed through the connective tissue or the peritoneal covering of the *cul-de-sac* and suppuration occurred.

Sterility.—R. CHROBAK, Vienna (*Wiener Klin. Wochenschr.*, December 17, 1901).—In this essay the writer lays special stress upon one symptom which heretofore has been entirely neglected in connection with this question. He found as a frequent cause of sterility certain conditions which bring on an immediate escape of the semen after cohabitation. These conditions are: hyperactivity of certain muscles, relaxation of the vaginal walls, and defects in the perineum. He obtained good results with plastic operations, especially when combined with splitting of the posterior lip of the cervix. In his opinion, the too ready escape of the semen may alone offer an indication for operation in cases of retrodeviation of the uterus.

The Treatment of Ectopic Pregnancy.—E. IHM (*Zeitschrift fuer Geb. und Gyn.*, vol. xvi., No. 2).—The author reports the results obtained in thirty-nine cases, nineteen of which were treated by operation, twenty conservative. The immediate results were in both categories satisfactory, but differences of great practical importance were shown in the remote results. While all the operated patients were enabled to do their work four weeks after operation, in the non-operated patients it was necessary to continue treatment for many months or even years. This experience tends to prove that operation is to be preferred.

Ovariectomy in Pregnancy; Three Recent Cases.—JOHN B. HELLIER (*Lancet*, December 21, 1901).—Giving the reports of three successful cases of his own, operated upon at the third, fourth and sixth month of pregnancy, respectively, the author states, in conclusion: Ovariectomy is now recognized as the best treatment for almost all cases of pregnancy complicated by ovarian tumor. The mortality of the expectant method was found by Remy to be 23 per cent. for the mother and 39 per cent. for the child. The mortality in cases in which the pregnancy has been terminated for the presence of ovarian tumor was 22 per cent. in 125 cases collected by Dsirne. On the other hand, the mortality of ovariectomy in pregnancy, performed with modern precautions, is estimated at 5.9 per cent. by Dsirne, 8.4 per cent. by Weiss, and 4.09 per cent. by Vinay. The best results

for the child are obtained by operation between the third and fourth month. Even double ovariectomy has yielded good results for the child. In seventeen cases there were only two abortions and three premature labors.

Prognosis and Indications of Ovariectomy During Pregnancy.—E. ORGLER (*Archiv. fuer Gynaek.*, vol. lxx., No. 1).—In Professor Landau's clinic in Berlin ovariectomy was performed during pregnancy in ten cases. All patients recovered. In four cases abortion occurred after the operation. In a compilation of one hundred and forty-eight operated cases the author calculates a mortality for the mothers of 2.7 per cent. A premature interruption of the pregnancy was observed in 22.5 per cent. of the cases. In his opinion the prognosis of the operation is better in an early stage of pregnancy.

Tuberculosis of the Tubes and Uterine Mucosa.—R. KUNDRAT (*Arch. fuer Gynaek.*, vol. lxx., No. 1).—One hundred and forty specimens extirpated on account of inflammatory conditions were examined. Tuberculosis of the tubes was found four times; tuberculosis of the endometrium but once. In one case there was a tuberculosis of the tubes co-existing with a carcinoma of the cervix; in this instance in an extirpated lymphatic gland both carcinomatous and tubercular changes were found. [Penrose says in his "Text-book of Diseases of Women" (1901, page 305): "During the past three years Dr. Beyea and I have found tuberculosis of the tubes present in eighteen per cent. of the cases that were subjected to the operation of salpingo-oophorectomy for inflammatory disease of the tubes. It may be said, therefore, that tuberculosis is present in from eight to eighteen per cent. of all cases of inflammatory disease of the uterine appendages."—Ed.]

The Formation of Metastases in the Ovaries in Cases of Primary Carcinoma of Other Abdominal Organs.—E. KRAUS, Vienna (*Monatschr. fuer Geb. und Gyn.*, vol. xiv., No. 1).—The author takes into consideration only the cases in which there are found metastases in the ovaries, the location of the primary carcinoma being in an abdominal organ far remote from the ovaries, such as the stomach, gall-bladder, etc. In these cases we seem justified in excluding the usual mode of dissemination by way of the blood or lymphatic vessels. A more satisfactory explanation is offered by the theory of Recklinghausen, viz., that in these instances particles of the primary carcinoma have found their way through the abdominal cavity, and have finally invaded the ovaries by penetrating their epithelial cover. A strong justification is given this theory by the result of a careful examination made by the writer in five cases. He examined three cases of primary carcinoma of the stomach, one of carcinoma of the cecum, and one of the ductus choledochus. In each case metastases were found in various abdominal organs besides those in the ovaries. In all instances microscopical examination revealed the fact that the malignant growth was progressing in the ovaries in an inward direction, the peripheral areas always showing the carcinoma in its earliest stage of development. The excellent blood supply of the ovary, its hyperemia, and the lesion of its surface at the time of rupture of a Graafian follicle, offer the contaminating carcinoma particles good opportunities for further development. It is of the greatest importance from a clinical standpoint to carefully examine the ovaries in all cases of carcinoma of the stomach, gall-bladder, etc., and *vice versa*, to search for gastric symptoms if a malignant growth is found in the ovaries, as the latter may be but a metastasis. In an appendix to his essay the author gives the results of experiments made in animals in regard to the possibility of invasion of the ovaries by small particles. He injected a solution of India ink into the abdominal cavity of rabbits and was able to find granules of the ink in the ovarian tissue forty-eight hours after the injection.

PEDIATRICS.

Acute Hemorrhagic Nephritis Complicating Influenza.—MILTON MILLER (*Arch. Ped.*, January, 1902).—Forty cases of influenzal nephritis taken from literature are analyzed and one case is reported. The author's case was an infant thirteen months old. The infant presented typical symptoms of influenza, high fever, coryza and cough. On the next day persistent vomiting and slight diarrhea began. Five days later suppression of urine and slight edema of the limbs appeared. Examination of the urine gave the following result: Color, red; strongly acid; albumin, 0.5 per cent., by bulk; no sugar or bile; microscope—abundant red-blood cells, leucocytes, renal epithelium, granular casts, blood casts, colloid casts and uric acid crystals. In about one month the urine was normal.

In studying this case and analyzing the other reported cases he gives the following conclusions:

Nephritis is a rare complication of influenza, occurring chiefly in young adults and children; in infancy it is almost unknown. Albuminuria is probably present in all severe cases. Hematuria alone is not infrequent, and, like the nephritis, is seen oftenest in early life. The sexes are affected equally. The nephritis may appear early in the influenza or at varying periods after the acute symptoms have subsided. It is usually an early complication, occurring in one-half the cases within eight and in two-thirds of the cases within twenty-one days from commencement of the influenza. The clinical type varies. It may be that of an ordinary acute nephritis, but in the majority of cases is of the hemorrhagic type, this form being especially frequent in young adults and children. Edema is absent in more than half the cases and is apt to be slight. The onset is usually attended with fever. The nephritis is of short duration, generally lasting under three weeks. The prognosis is good, recovery being the rule, although a small number of cases pass into the chronic subacute stage. When influenza attacks those whose kidneys are already diseased it is apt to be serious and fatal.

The Malnutrition of Tuberculosis.—CRANDALL (*Ibid.*).—The writer discusses the various phases of tuberculosis in infancy and childhood, particularly in reference to the nutritive state.

He concludes as follows:

1. Wasting, anemia and other evidences of malnutrition are constant accompaniments of tuberculosis in children.

2. These symptoms may occur in infants long before local disease can be detected, and occasionally no local signs whatever are manifest before death.

3. In infants tuberculosis shows a special tendency to be disseminated or to conceal itself in the deep tissues, as the lymph nodes. The disease may then run a course identical with simple marasmus.

4. In some cases a period of anemia and wasting is followed by a stage of irregular fever, after which local lesions appear, usually in the lungs.

5. In other cases tuberculosis in children begins with well-marked local manifestations, particularly pneumonia. In these, evidences of malnutrition appear promptly and are usually progressive.

6. The anemia of tuberculosis, whether it appears before or after the occurrence of other symptoms, is usually a simple anemia, and presents nothing characteristic.

7. A diagnosis of tuberculosis cannot be made alone from the character of the anemia or the malnutrition. However, persistent and increasing malnutrition in a child without discoverable cause is always suggestive of tuberculosis.

8. Anemia in adolescents should receive prompt and active attention, for it vastly increases the danger of tubercular invasion, which is particularly common at that period of life.

Tuberculous Meningitis.—CAUTLEY (*Med. News*, January 4, 1902).—At the Society for the Study of Diseases of Children (London) Cantley recently read a paper on the etiology and pathology of tuberculous meningitis in children based upon the best post-mortem and clinical findings in the last twenty-seven fatal cases under his care. Twenty-two were children under five years of age and only five were between that age and ten years. Family predisposition existed in five cases. In only two was the disease limited to the membranes of the brain and cord. In twenty-three the glands of the mediastinum were cheesy, and in four the mesenteric glands were also cheesy. From this study a brief summary is given. So-called heredity means exposure to infection. Injury is rarely an exciting or a predisposing cause. The respiratory tract is the great channel of infection. The alimentary tract is rarely primarily affected. Tuberculous milk is rarely, if ever, the source of the infection. The outlook for life is always hopeless on account of the extent of the tuberculous disease elsewhere in the body. The evidence obtained from the examination of the brain shows that all operative treatment should be discarded.

Congenital Dilatation of the Colon.—GWYNNE (*Ibid.*).—He showed a case of congenital dilatation of the sigmoid colon. The boy was sixteen years old, obstinately constipated since birth, and had chronic enlargement of the abdomen up to thirty-one inches in circumference at the navel before admission. No action of the bowels could be obtained, and an iliac colotomy was done. After the operation the boy improved in general health and his abdomen reduced to almost normal proportions.

Amebic Dysentery in Children.—AMBERG (*Bull. Johns Hopkins Hosp.*, December, 1901).—This is a very important contribution to the study of amebic dysentery. Five cases are reported. The diagnosis was based upon the finding of motile amebæ containing red-blood corpuscles. The cases were moderate in intensity. The age of the children was two to five years. Four were boys. They came under observation at the dispensary.

Little fever was present. The stools varied in frequency from four to twenty-four. Only one complained of much pain. In two cases prolapsus recti occurred. No abscess of liver was found. The reaction of the feces was mostly alkaline. They were offensive, liquid or solid, and accompanied by bloody mucus. The ameba may be found only on repeated examination. If in the passages of a child Charcot-Leyden crystals are found, amebic dysentery should be considered. The blood picture varied greatly. A leucocytosis (13,800 to 27,000) existed in every case when first examined.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

Glycosuria and Insanity.—W. R. DAWSON (*Med. Press and Circular*, January 1, 1902).—Cases of glycosuria associated with insanity belong to two classes—those in which marked mental phenomena have arisen in the course of a glycosuria which, presumably, gave rise to them, and those in which glycosuria developed as a symptom during an attack of mental disease. The former class is rare, the latter fairly common. Some mental depression is very nearly always found in individuals suffering from diabetes, but it is rare that such symptoms develop into actual insanity. The clinical histories of seven cases are given in

this article, the first case of which belongs to the first division. The prevailing characteristic in all these cases is mental discomfort in varying degrees and severity. The author does not think that glycosuria is necessarily a bad prognostic symptom, as five out of the seven cases made good recoveries.

Multiple Sclerosis of the Central Nervous System.—T. HOFFMAN (*Deutsche Zeitschrift fuer Nervenheilkunde*, vol. xxi., Nos. 1 and 2).—A resume of the modern conception of multiple sclerosis, based upon the observation of one hundred cases and the post-mortem examination of three cases. Under etiology, the greatest importance is given to trauma and infectious agents. In fully one-half of the cases no etiological factor was obtainable. Symptomatology: the polymorphic character of the symptoms is especially emphasized. As a matter of fact, outside of the classical symptoms, such as nystagmus, intention tremor and spastic paretic gait, almost any symptom peculiar to the nervous system may be a part of the clinical picture of multiple sclerosis. Great stress is laid upon the eye symptoms, and in this respect the presence of a beginning optic neuritis, especially of the temporal side of the eye-ground, is of the greatest significance. All cases of so-called hysterical optic neuritis in which eye-ground changes are found are probably cases of atypical multiple sclerosis. There are some twenty-three diseases which are of interest from a differential diagnostic standpoint. The most important of them are tabes dorsalis, hysteria, combined system disease, brain tumor, dementia paralytica, neurasthenia, paralysis agitans. Multiple sclerosis probably cannot be cured. The length of the disease varies from a few months to many years, the patient dying from some intercurrent disease.

Pathology.—In the multiple sclerotic foci may be observed changes in the blood vessels, in the neuroglia and in the specific nerve elements. Outside of the increase in the neuroglia elements the most striking and perhaps the characteristic change is the disappearance of the myelin sheaths with the normal condition of the axis cylinder and nerve cell. This change has been called the naked axis cylinder. It seems rather certain that this is the one typical pathological change found in this disease.

The preservation of the nerve cell with an intact axis cylinder prevents any secondary degeneration from taking place, a fact which may be regarded as the second point in the pathology of this disease. In which of the three elements of the central nervous system the process plays its chief part, whether in the neuroglia, the blood vessels, or the nerve cells, is as yet undecided.

Dietetic Treatment of Epilepsy.—SCHAEFER (*Neurog. Centralblatt*, No. 1, 1902).—An account of three cases upon whom the treatment of Toulouse and Richet was tried. This treatment consists briefly in the withdrawal of all chlorine compounds from the food, especially the NaCl, and supplying in their places the bromide salts. In this way very large doses of bromide can easily be borne. The cases upon which this report is based were all old chronic epileptics with high degrees of mental enfeeblement. They averaged twenty to thirty attacks per month. The experiments lasted two weeks and were carried out with the greatest care. The attacks ceased wholly in one case after two days, and in the others in five and ten days. The psychical condition was markedly improved, as was also the physical. As soon as the old diet was again given to the patients the seizures returned. The author believes that this diet treatment is a very valuable therapeutic adjunct in the treatment of epilepsy.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Cure of Chronic Bright's Disease by Operation.—EDEBOHLS (*Med. Rec.*, December 21, 1902).—The author first operated upon chronic nephritis, November 29, 1902, and while the operation was primarily a nephropexy, done for the relief of a loose kidney with nephritis, the result was a cure of the nephritis. In all he has operated upon six cases of nephrotosis with nephritis, obtaining favorable results in four. On January 10, 1898, he undertook for the first time this operation for the purpose of curing chronic Bright's disease, doing a bilateral nephropexy, with radical cure of the Bright's disease. He reports eighteen cases operated upon for chronic Bright's disease, five of which had right chronic interstitial nephritis; four had left chronic interstitial nephritis; four had right and left chronic interstitial nephritis; two had right and left chronic parenchymatous nephritis; three had right and left chronic diffuse nephritis. In fourteen of the eighteen both kidneys were operated upon; in twelve at one sitting, and twice at two sittings. In four cases operation was performed on one kidney only, in every instance the right. Two of them recovered complete and lasting health.

Chronic Bright's disease was unilateral in nearly one-half of all the cases, which fact was somewhat of a surprise and revelation to the author. He finds no difficulty in recognizing the disease in the kidney as it lies pulled through the wound before him with the blood circulating through it. From two cases a piece of the kidney was obtained, and the diagnosis verified by the pathologist.

While extensive denudation of the kidney was a factor in all the nephropexies, in the last two cases total extirpation of the capsule was done; in one, bilateral at one sitting; in the other the patient had but one kidney. The right had been removed for a septic process some months prior.

The method of operating is in part as follows: After cutting down to the kidney, it is freed from its fatty capsule and brought out through the wound to full view. The capsule proper is incised along the entire length of the convex external border and clean around the extremity of either pole. Each half of the capsule is now dissected from the organ and cut off clean to its junction with the pelvis, and removed. The kidney is dropped back in place and the wound closed without drainage, unless there is extreme edema of the parts, when drainage is used. Ether was the anesthetic used in all cases except one.

Of nine cases operated upon one year or longer ago, one only failed of radical cure of the Bright's disease. This one had the left kidney removed by another surgeon three years later, and the right kidney, which the author had operated upon, sustained life for five years longer, when a third surgeon did a hysterectomy, from which the patient died. Four cases were operated upon six months ago: two are free from casts and albumen; the other two show improvement. In the two last cases operated upon, the time is too short for deductions.

The author believes, especially from the above eight cases of cure operated upon one year or longer ago, that chronic Bright's disease is curable by operation, but as the time required for improvement to begin to show itself is ten days or more, and as this improvement is gradual, the late stages of the disease may not be fitted for the procedure.

While operating on a kidney on which a nephropexy had formerly been done, he observed numerous arteries large enough to require ligation, passing between the fatty capsule and the kidney with the flow of blood *towards* the kidney. This increased blood supply, most probably, leads to gradual absorption of the adventitious tissue in the diseased kidney, giving relief to the tubules

from pressure, and allowing the epithelia to regenerate. The cure is gradual, requiring from one to twelve months. It is not a relief of kidney tension from removing the capsule, but of vascularization. The capsule in chronic Bright's disease never compresses the organ, although it may be adherent, but may even sit loosely upon the kidney. The fatty capsule and the kidney are both liberally supplied with blood vessels, and the denuded kidney furnishes an extensive surface for intercommunication, while the fibrous capsule proper is an impenetrable barrier to the passage of the blood vessels.

The author operates if the expectancy of life is more than a month, if there are no incurable complications, and an anesthetic is not contra-indicated.

Renal Tension and Its Treatment by Surgical Means.—R. HARRISON (*Brit. Med. Jour.*, October 19, 1902).—In 1896 Harrison called attention to the improvement in certain renal cases after exploratory operation, in which no recognizable cause had been discovered for the clinical symptoms, and said it seemed reasonable to infer that these results were due to the relief of renal tension. Different from the times of Bright, we can now see and explore a living kidney with ease and safety *in situ*.

Other authors have described renal tension in such terms as "extravasation of blood in the Malpighian bodies," "exudation between the tubules," "the tubes are filled with degenerated epithelia," etc., and it is difficult to understand how repair can be carried through to a successful issue without occasionally requiring some mechanical assistance. Like the leakage of urine in the sub-urethral tissues, as it passes over a damaged epithelial lining of the mucous membrane, renal tension may cause leakage of urine into the kidney tissues, which may act as an active exciting agent. As in ocular tension in glaucoma, and testicular tension in acute orchitis, mechanical interference often saves the organ; so in renal tension.

The author reports six cases operated upon since 1878, which had kidney symptoms or lesions that were removed or improved after puncture of the organ. The first four were inflammatory, and the two others showed other phases of renal tension. As a type, he considered the groups of nephritis in scarlet fever. Only those cases which show no sign of improvement in the proper time, or those in which the type is malignant from the beginning, the organ being overwhelmed at once and showing signs of suppression, etc., need operation. When the tension is relieved urinary excretion increases at once and the general circulation improves.

The following may be regarded as some indications for relieving tension surgically: Progressive signs of kidney deterioration; suppression of urine or approaching that state; marked disturbance of the heart and circulatory apparatus arising in the course of inflammatory renal diseases.

The author splits the capsule along the convex border; or, if indications for exploration of the kidney are present, he extends the cut through the kidney substance into the pelvis. Numerous punctures over the surfaces of the organ may be made. A drainage tube is then inserted and the wound is sewed up about it. Drainage is essential, from seven to ten days usually, as there is always considerable discharge. It is a matter of indifference as to which kidney is operated upon unless there is something to indicate it, such as pain, since the relief of tension in one kidney relieves the other.

Radical Cure of Hypertrophy of the Prostate.—ALBARRAN (*Le Progres Medical*, December 14, 1901).—Albarran is convinced that the loss of vesical contractility is secondary to the glandular lesions and that the difficulties of urination are due to the mechanical obstacle of the hypertrophied prostate, together with the lessened vesical contractility. He reports fourteen cases operated upon

during the last six months without a death. All of them, ranging in age from fifty-seven to seventy-three years, were infected cases; three had pyelonephritis, and several were in a bad general state; eight are cured—that is, empty their bladder completely, are in a good general state, have clear urine and no need of a catheter; one is lost sight of; two recently operated upon still use a sound; three empty their bladder but are still under treatment, leaking a little from the perineum. He operates from the perineum, removing as much of the prostate as is possible without injuring the sphincter, doing the subcapsular operation after the manner of Nicoll, and injuring only the inferior wall of the prostatic urethra. The edges of the urethral wound are trimmed and partially sewed together, with enough space left to allow of drainage. Prostatectomy is the operation of choice, and the perineal route furnishes the best method of doing it.

Technic of Fixation of Prolapsed Kidney.—GOELET (*Amer. Med.*, December 28, 1901).—The author uses silk worm gut boiled in lysol, which renders it as pliable as catgut, for fixation sutures. While prolapsed kidney may be only one element in a general enteroptosis, nephropexy will aid in keeping the other organs in place, and should be done. Abdominal support which failed before the operation is successful afterwards. Nephropexy does not *per se* involve any risk. It has been an observation of the author that in every case of double nephropexy, the kidney most prolapsed is greatly congested, and its structure is so softened that sutures tear out easily, whereas the opposite kidney, where the degree of prolapse is less, is not congested, and its structure is firm.

At the operation an incision is made along the outer border of the erector spinæ muscle, beginning just below the twelfth rib and extending downwards parallel with the spine for about three inches. This incision is made with the knife down to the superficial fascia, which is then divided with scissors. The muscles are bluntly separated in the direction of their fibers until the fatty capsule of the kidney is exposed. This is opened with scissors well over towards the spine and upwards, and the kidney loosened from any attachment that it may have to the fatty capsule. Two fixation sutures are now passed through the capsule proper of the kidney in its lower half. The method of passing these sutures in the kidney is well illustrated, for which the original article must be consulted. The free ends of the sutures are next carried through all of the structures of the back, including the skin, one on each side, at the upper angle of the wound and tied over gauze. A gauze pack is now placed under the lower pole of the kidney to support it, to excite plastic inflammation, and for drainage, and brought out at the lower angle of the wound, the redundant fatty capsule having previously been trimmed. The wound is brought together with adhesive strips, and over this the dressings. The gauze drain is removed on the third or fourth day and additional strips of adhesive plaster applied. The fixation sutures are not removed until two days before the patient is allowed to get out of bed. The patient should be kept in bed three weeks.

Primary union is the rule.

Gonorrheal Vulvitis in Young Children.—PETERSON (*Amer. Med.*, January 11, 1902).—Peterson concludes in part as follows:

Gonorrheal vulvitis in young children is more common than is generally supposed. While more frequently met with amongst unhygienic surroundings in large cities, it is by no means a rarity in the less thickly settled districts. It is more frequent below the age of six, and is more common in girls than in boys. Specific vulvo-vaginitis in the large majority of cases arises from actual contact of the patient from some infected person; however, the disease may be spread by other means, such as a common bath, towels, bed-linen, etc. The vagina is more frequently affected in the child than in the adult, owing to the character of the epithelium. The tubes, ovaries, and peritoneum may be involved in the

pathologic process. It is not improbable that certain diseases of adult life may be ascribed to gonorrheal infection in infancy. Purulent ophthalmia and rheumatism are quite frequent complications. The treatment of specific vulvo-vaginitis must be energetic to be of any avail. Under certain conditions the vaginal orifice should be widely dilated and the vaginal pus cavity properly drained.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Syphilitic Reinfection.—(*Annales de Dermatolog. et de Syph.*, December, 1901).—MRAGEK presented a man before the Gesellschaft der Aerzte in Wien (February 22, 1901), who had contracted syphilis seven years ago; he was then thoroughly treated with injections of sozoiodolate of mercury and iodide of potassium. In the course of the month of October previous to the presentation he had been newly infected. At the present time he presented the cicatrice of the chancre, adenopathis and a syphilitic exanthemata. In this case one finds all the conditions necessary to make a positive diagnosis of reinfection.

J. Neumann has observed in all eight cases of syphilitic reinfection, the shortest interval between the two attacks being two years.

These cases demonstrate in an irrefutable manner that syphilis is curable.

One must admit a reinfection when the ganglionic enlargements, the syphilides and the course of the two infections have been observed by the same physician.

Granuloma Annulaire.—H. RADCLIFFE-CROCKER (*British Jour. of Dermatology*, January, 1902).—Dr. Crocker reports six cases—four personal, one of Dr. Pringle's and one of Mr. Pernet's—of an eruption possessing definite characters in common which show that they belong to one clinical group. In brief, the principal characters consist of nodules or papules of slow development which tend to form circles by partial coalescence, leaving the component nodules still visible. They involute slowly, so that the circle is broken, and often a crescent or gyrate patch is left. The inner or involuted side of the ring slopes down gradually into the normal skin, leaving the part which has been affected slightly reduced for some time; the outer border is more abrupt, but crenate or nodular, and there may be a narrow areola. The color of the lesion, red or pale. The nodules are firm, some may have a warty character (in two cases these were associated with common warts). Often the lesions are flat and suggestive of lichen planus. The location is chiefly on the wrists, backs of the hands and fingers, also on the neck; they have also been seen on the head behind the ears and upper part of the face, seeming to have a selection for the bony prominences.

Dr. Crocker concludes that these cases, clinically and histologically, appear to correspond with the pathological condition we call granuloma.

Disseminated Gangrene of the Skin in Children.—A. VIELLO and J. HALLE (*Annal. de Derm. et de Syph.*, May, 1901).—This case gave the authors a good opportunity for thorough study. A child eighteen months old had numerous phlegmonous ulcers on the neck and chest, following an attack of measles, death ensuing in eleven days. In the beginning the ulcers were the size of penny or slightly larger, but before the end they destroyed large areas down to the muscles and bones.

From the open ulcers the pus gave the staphylococcus, but when taken from

an unopened abscess by a pipette the cultures showed a bacillus staining by Gram's method and the aniline dyes. This organism grew best as an anerobic, as whitish grey colonies on agar-agar and bouillon. It is motile, straight or slightly curved, often in pairs or with branches. The bacillus inoculated into skin of animals caused gangrenous ulcers and abscesses.

From the characters of the organism the authors consider it to be identical with the bacillus ramosum of Veillon and Zuber.

Histologically in the deeper part of the corium endarteritis considerable infiltration was found with this bacillus in masses, while superficially there were cocci in pairs or singly.

Flesh-Colored Powders, Ointments and Pastes.—HUGO GOLDSCHMIDT, M. D., (*Therapeutic Monthly*, December, 1901).—The writer has discovered a procedure which meets all the requirements of simplicity and cosmosis in imparting to the ointment, powder or paste a flesh tint. He calls this solution "ichthosin" and is composed of eosin and ichthyol in such proportions that added in certain quantities to the base it imparts a flesh tint. He has five different solutions of this preparation, graduated according to the amount of red it contains, and are designated as ichthosin No. 1, 2, etc. Solution number 1 is the weakest in red. In every prescription ten per cent. of oxide of zinc must be added to give the requisite white color.

Trophoneurosis Affecting the Hair, with Photographs of a Case.—F. SAVARY PEARCE (*American Medicine*, December 28, 1901).—An interesting case of trophoneurosis affecting the hair is described by this author. The patient is an American woman of twenty-seven years. Previously she had a very heavy head of brown hair, with jet-black eyebrows and eyelashes. Ten days before the heavy alopecia developed she had a "cold in the head," and this was followed by an herpetic eruption of the face, the back of the neck and the region about the mouth. This was followed by extreme itching about the face and vulva. On the morning of November 18, 1900, she noticed a bare spot on the vertex of the head about the size of a twenty-five cent piece. The hair rapidly fell out and was completely shed. The eyelashes, brows, etc., and hair of the pubes fell out, also the hair on the side of the face, arms, but none of the axillary hairs. The hair of the scalp returned sparsely two months after the initial attack, and was snow white. Her eyebrows and eyelashes returned but were white. Different remedies had no effect. Electricity and phosphorus did not seem to do much good. By October, 1901, a few black hairs had appeared on the scalp, the left eyebrow had returned to its original black color. The history of the case gives but one clew to the origin of the trouble, and that is, some mental worry over trouble with a friend. There was a general condition of neurasthenia present, too.

LARYNGOLOGY AND OTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

Infective Otitis Media Without Its Usual Subjective Symptoms.—HIRAM WOODS, JR. (*Maryland Med. Jour.*, January, 1902).—When there is no appreciable defect in the hearing, subjective noises are absent, the ears are free from pain or discharge, and the pharyngeal lesions absent or trivial, if otitis media occurs under these circumstances, and produces only such symptoms as are common to infection anywhere, the cause of the symptoms will be discovered only if

there is appreciation of the importance of embracing the ear in routine examination. The clinical history of such cases runs about this way: The patient, generally a child, has general malaise, chilly sensations, and more or less fever. There may be a little sore throat. Diagnosis is withheld or made as "grippe." After three or four days there is earache of short duration, heat is applied, and soon pain is relieved by perforation of the drum.

The case is looked upon as an otitis media, sequel to "grippe." The author has seen a number of such cases during the past two years, and accounted for them as indicated. Two of the cases developed mastoid symptoms after tympanic disease had subsided, and hearing had become normal. Operation showed extensive destruction of the cells with necrosis of the inner mastoid table and exposure of the sinus and dura. A brief history of three cases is given, viz.:

One was a case of infectious endocarditis seen at the Johns Hopkins Hospital. The patient did not seem very ill. There was some fever, with a decided leucocytosis. In looking for a cause, other things having been excluded, a history was obtained of transient earache and defective hearing on one side some two weeks previous. Inspection showed redness in Schrapnell's membrane, and incision evacuated a little pus from the attic, showing streptococci. The history of ear trouble before anything else and the findings, when the surgeon operated, makes it strongly suggestive that the aural affection was primary, and the fatal endocarditis secondary.

The second was that of a little girl who had had transient ear trouble, with slight pain and a few days of fever. When seen, two or three weeks later, the child was supposed to have typhoid fever. Blood examination negatived this, but showed increased leucocytosis. It was only then that the ear trouble was recalled. Signs of attic inflammation were found. The drum was incised, and recovery was immediate.

The third case was that of a boy nine years old. He was taken ill on April 23d with nausea and fever. On the 26th he developed right earache, with otorrhea two days later—a profuse, stringy discharge showing streptococci. There was no local mastoid tenderness nor redness. Pharynx somewhat congested. Leucocytosis estimated at 13,000. Otorrhea ceased in four days, and the child seemed convalescent. On the evening of May 10th, after a short paroxysm of earache, the temperature reached 104.4° F. There was a little pain over the mastoid and some slight discharge, which lasted a day, and the ear recovered without a mishap. Six days later, on the morning of the 16th, the child became restless, and had a temperature of 101° F. No renewal of the trouble could be found in the right ear, but the left drum showed some congestion of the upper posterior angle. Nothing else could be found to account for the fever. During the night he developed pain. The next day the redness had extended, but there was no bulging. Incision of the drum was made and prompt recovery followed. This child showed increased leucocytosis three days before local ear symptoms developed. However, the right ear was evidently the seat of infection. At the time of operation there was very little pain in the ear.

The lessons such cases teach us are that the ear should be included in routine search for infection causing general symptoms, whether or not there is loss of function or earache; a blood examination may be of service in doubtful cases of ear disease; when infection has been traced to ear, the latter should receive the same treatment—drainage—which surgery gives elsewhere.

The Relation of the Middle Turbinate Body to Chronic Diseases.—CHARLES H. BAKER (*Phil. Med. Jour.*, December 28, 1901).—The author says that the easy accessibility of the inferior turbinate body, and its proneness to participate in all nasal irritations and to respond by swelling and producing nasal obstruction, has made it the scapegoat for the rest of the offending organ.

Acute observers have long since recognized the fact that chronic nasal disorders exist which are out of the sphere of influence of the inferior turbinate, but the weight of authority favored nasal stenosis as the cause of nasal disease, and the possibility of other factors being more active than this one has been overlooked.

A brief review of the anatomy of the middle turbinate is given with the following indications for its removal:

1. In cases of nasal polypi.
2. When the openings of the sinuses are occluded by swollen membrane which is not yet polypoid and which does not respond to other recognized modes of treatment.
3. Crusting of fetid discharges in the upper portion of the nasal chambers in non-specific cases.
4. In cases of so-called "bullous" hypertrophy of the middle turbinate.
5. When the middle turbinate lies in close contact with the septum and produces various nervous disturbances, as sneezing, coughing, headache, asthma, etc.
6. Vaso-motor rhinitis running along into other than the normal period of the year, which, with the return of potency and improved breathing, still suffers from pressure, sneezing, reflex cough, etc.

The operation is done as follows: After cleansing the nose, an application of eight per cent. sol. of cocaine with a pledget of cotton on an applicator or wad, followed by thin pledgets laid on the upper surface, and between bone and outer wall, where they remain ten minutes. Adrenaline is then applied. Holmes' middle turbinate scissors are then used and the attachment of the bone divided from before backward. If the rear portion is out of reach it is removed with snare. The cavity is packed with iodoform gauze, which is usually removed the following day. Frequent cleansing with borax sol. is done until healing is complete.

Laryngeal Paralyses and Their Importance in General Medicine.—J. W. GLEITSMANN (*New York Med. Jour.*, December 14, 1901) considers the organic causes of laryngeal paralysis under two distinctly separate divisions, viz.: those emanating from the bulbous and spinal column, and peripheral ones. The former are softening processes, hemorrhages, syphilis, tumors, diphtheria, progressive bulbar paralysis, amyotrophic lateral sclerosis, syringomyelia, and locomotor ataxia. Peripheral causes are tumors of the neck (cancer of the esophagus), aneurism of the aorta, of the innominate, or of the right subclavian (on account of the greater frequency of aortic than subclavian aneurism, the left recurrent is oftener paralyzed than the right), mediastinal tumors, such as malignant growths, infiltration of the peritracheal or bronchial glands in syphilis, pleuritic adhesions, as in tuberculosis, traumatism and injuries; further, infectious diseases, influenza, scarlet fever, typhoid fever, toxic influences, principally lead, which is apt to produce also adductor paralysis or rheumatism, both causing peripheral neuritis, although the diagnosis of rheumatism ought not to be made hastily and before an earnest and conscientious search for other factors has been made. The paramount importance of these paralyses (especially of the abductor muscle) for the practitioner results from the fact that it has very often been accidentally discovered, at a laryngoscopic examination, and is also frequently observed before the underlying grave affection has been recognized or has caused any perceptible symptoms. Two examples are cited. One a case in which abductor paralysis antedated all the other usual symptoms of locomotor ataxia, and another in which the position of one vocal cord in the median line (in an otherwise apparently healthy person) was the incentive to a careful examination of the entire organism. In the latter an aneurism was found. Another equally important point for practical medicine consists in the absence of any laryngeal subjective symptoms in many cases, when only unilateral abductor paresis is

present. The author advises that in all doubtful and obscure troubles a thorough examination of the larynx should be made.

Post-Scarlatinal Diphtheria and Rhinorrhea and Otorrhea.—EDGERTON H. WILLIAMS (*British Medical Journal*, December 21, 1901) has studied post-scarlatinal diphtheria, rhinorrhea and otorrhea, and believes it advisable to make bacteriological examinations of the discharge in all cases of rhinorrhea and otorrhea in scarlet fever, excepting possibly the acute attack of rhinorrhea. When bacilli are found in such cases, if they at all resemble the diphtheria bacillus they should be regarded as a modified variety of that organism. Patients presenting those complications should be isolated. He does not definitely advise the administration of antitoxin to patients presenting diphtheria bacilli in these discharges, but in the two cases that he reports, rhinorrhea was followed by the deposit of membrane in the throat; and it is possible that the use of antitoxin might have prevented this formation. These discharges are frequently unaccompanied by sore throat or other symptoms, and may be easily overlooked.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

Noma of the Eyelids in an Infant.—MARLOW (*Ophthalmic Record*, December, 1901).—The patient was an emaciated, ill-nourished baby of three weeks. The ocular trouble began at the end of the first week with swelling of the lids and thin, non-purulent discharge from the conjunctiva. Later a "pimple" formed on the skin of the upper lid, which eventually broke down. The ulcer thus formed extended until all tissues of the upper and lower lid were destroyed. The cornea, which was covered by a slough of the necrotic tissue of the lid, became opaque, ulcerated, and finally perforated with prolapse of the iris. Spreading of the ulcer was controlled by Labarraque's solution. The child died at the age of three months.

The Value of Ocular Examination as an Aid in the Diagnosis of Certain Manifestations of Hereditary Syphilis.—PUEGH (*Archiv. d' Ophthalm.*, November, 1901).—Of twenty-seven cases of interstitial keratitis observed during the past six years, Puegh has found in eleven well-marked affections of the joints, principally of the knee, more rarely of the elbow joints.

The arthritis ran a chronic course and was usually diagnosticated as "rheumatism." It failed, however, to respond to antirheumatic and tonic treatment. Finally a typical interstitial keratitis developing, a "mixed treatment" was instituted and the joint affection rapidly improved.

Puegh suggests that the classic symptom-group of late hereditary syphilis, *e. g.*, Hutchinson teeth, interstitial keratitis and auditory disturbances, be enlarged to include these joint affections.

Beef Worm in the Orbital Cavity.—T. W. F. GANN (*The Lancet*, January 4, 1902).—The case, which occurred in British Columbia, is thought to be unique. The patient, a young male, gave a history of pain in the left eye, and "a sensation as if something were moving about within the socket." Examination revealed a moderate exophthalmus and enormous bulging of the entire inner canthus.

Immediately to the inner side of the caruncle was a minute circular orifice, through which the tail end of the worm protruded from time to time. The head was deeply imbedded in the orbital tissues.

Following the method of treatment in vogue among the negroes, Gann injected a few minims of a strong solution of tobacco. A few hours later the worm was found to be inactive and was extracted with forceps. The patient made a good recovery with vision unimpaired.

The Non-Surgical Treatment of Heterophoria.—G. M. GOULD (*J. Am. Med. Assn.*, November 23, 1901).—Gould insists that "any operative treatment whatever of heterophoria is not only useless but bad. For not only does it not cure, but . . . it makes real cure far more difficult, sometimes even impossible." Heterophoria depending, in the great preponderance of cases, on an error of refraction, rational treatment should concern itself principally with the fitting of appropriate glasses.

Hyperphoria frequently disappears with proper correction of the ametropia, prisms rarely being required. Patients with high degrees of hypertropia are made entirely comfortable with prisms incorporated in their correction. The factors of proper treatment are: (1) accurate estimation of the refraction; (2) temporary *partial* neutralization by prisms in hyperphoria of 3° or over; (3) ocular gymnastics (excursions of the eyeballs upward and downward); (4) careful regulation of the position of the book or writing.

Esophoria of high degree may be compatible with ability to use the eyes comfortably and for long periods, provided the ametropia be accurately corrected. Cases in which suitable glasses fail to restore the muscular balance frequently are without symptoms.

Exophoria is by far the most frequent of the heterophorias, and "the most amenable to treatment." Therapeutic methods are: (1) accurate estimation of the ametropia; (2) daily exercises with prisms, bases out, conforming in strength to the degree of exophoria, the strength being increased until esophoria has been established or the symptoms have vanished.

Extraocular Complications of Sympathetic Ophthalmia.—L. DE WECKER (*Ann. d'Oculistique*, October, 1901).—Schirmer (Graefe-Saemisch, 2d Ed., Part iv., p. 98) affirms that extraocular affections complicating sympathetic ophthalmia are extremely rare and should be regarded as coincidental. De Wecker dissents from this view, and cites a case of total deafness occurring in the course of a sympathetic ophthalmitis, where, in all probability, there occurred a migration of micro-organisms to the auditory nerves.

BOOK REVIEWS.

THE PRINCIPLES AND PRACTICE OF MEDICINE. Designed for the use of Practitioners and Students of Medicine. By WILLIAM OSLER, M. D. Fourth edition. D. Appleton & Co., New York. 1901. Cloth, \$5.00.

This work has become too well and universally known to the medical world to require words of recommendation. Since the appearance of the first edition it has been recognized by teachers and students of medicine as an ideal text-book. Each edition has been revised up to date in a manner that rendered the work an authority on general medicine. In the present revision the chapter on typhoid fever has been in great part rewritten, with the addition of recent experience gained from Prof. Osler's unlimited material. Recent progress in the etiology and prophylaxis of many diseases, such as malaria, dysentery, yellow fever, the plague, etc., has necessitated, too, an overhauling of those chapters.

The author's power of observation, his conscientious work, together with the vast amount of clinical material at his disposal, give the stamp of reliability to all of his books and writings.

THE DIAGNOSIS OF INTERNAL MEDICINE. A Clinical Treatise Upon the Recognized Principles of Medical Diagnosis. Prepared for the use of Students and Practitioners of Medicine. By GLENTWORTH REEVE BUTLER, A. M., M. D. D. Appleton & Co., New York. 1901.

The work is divided into two parts. First, a study of symptoms and their indications; and second, a study of diseases and their characteristics. The object of the author has been to include in these pages all that is essential for making a diagnosis. Not only have subjective and objective symptoms and the ways of eliciting them been exhaustively dealt with, but also laboratory methods of diagnosis.

Nothing relating to diagnosis seems to have been overlooked. The illustrations are so numerous and the descriptions of complex methods so clear that the work will be as readily conceived by the student of medicine as it will by the practitioner. Too much attention has perhaps been given to the artistic production of the illustrations, the most of which have been taken from life. This, however, cannot be considered in any way objectionable. The work is invaluable to one desiring a means of ready reference to methods of diagnosis both in the consultation room and the laboratory.

PRACTICE OF MEDICINE BY EMINENT MEDICAL SPECIALISTS AND AUTHORITIES. Edited by GEORGE ALEXANDER GIBSON, M. D., D. Sc., F. R. C. P., Ed. J. B. Lippincott Company, Philadelphia. 1901. Vols. I. and II.

A hasty review of the list of contributors to this book is in itself sufficient to recommend it to those interested in scientific productions. Each chapter has been carefully prepared by a specialist of eminence in his branch. In this way only the most reliable and the most valuable information has been included in these covers.

The work consists of two volumes, the first containing exhaustive chapters on the general pathology of disease, general diseases, diseases caused by animal parasites, diseases caused by chemical substances, and diseases of the alimentary system. The second volume is devoted to diseases of the hemapoietic system, the circulatory system, the respiratory system, the urinary system, the integu-

mentary system, and the nervous system. The two volumes contain some 1600 pages of closely printed matter, with but few illustrations. Each disease is considered in a systematic way, which, together with a complete index, renders the information readily accessible.

AMERICAN EDITION OF NOTHNAGEL'S ENCYCLOPEDIA. TYPHOID AND TYPHUS FEVERS. By Dr. H. CURSCHMANN, of Leipzig. Edited, with additions, by WILLIAM OSLER, M.D., Professor of the Principles and Practice of Medicine, Johns Hopkins University. Handsome octavo of 646 pages, illustrated, including a number of valuable temperature charts and two full-page colored plates. Philadelphia and London: W. B. Saunders & Co. 1901. Cloth, \$5.00, net; Sheep or Half-Morocco, \$6.00, net.

It is a source of great satisfaction to those unfamiliar with the German to know that an American edition of Nothnagel's Encyclopedia of Special Pathology and Therapeutics has been authorized, and that many of the volumes are now in the press. The first of the series to appear is the volume on "Typhoid and Typhus Fevers," by Dr. H. Curschmann, of the University of Leipzig. The work has been edited, with additions, by Prof. Osler. It contains, therefore, all that appeared in the original, together with the latest views on the subjects in hand and the results of the author's own observations and investigations.

The chapter on the Bacteriology of Typhoid Fever has been thoroughly reviewed, with special reference to the distribution of the bacilli in the urine, rose-spots, blood, etc. The chapters on the Pathology, Diagnosis and Surgery have also been reviewed, and many newer ideas added.

Even before its revision this work was considered the most complete monograph on the subject in existence. It now contains practically all that is definitely known concerning typhoid and typhus fevers. Its ideal arrangement, complete index and numerous charts render it an invaluable reference book to those who meet with these diseases in their varied phases.

THE EVOLUTION OF SEX. By Professors PATRICK GEDDES and J. ARTHUR THOMSON. Published by Charles Scribner's Sons, New York. Price, Cloth, \$1.50.

This book is the first volume of the "Contemporary Science Series," edited by Havelock Ellis. In twenty-two chapters a general survey is given of the essential phenomena of reproduction and sex. The authors outline the main processes for the continuance of organic life and point the way towards the interpretation of these processes. The subject is presented for the general reader or the beginner in the study of biology; the specialist in this field will, however, find the book valuable as each chapter ends with an exhaustive list of literature pertaining to its contents.

THE ANNUAL AND ANALYTICAL CYCLOPEDIA OF PRACTICAL MEDICINE. By CHARLES E. DE M. SAJOUS, M. D., and one hundred Associate Editors. Fully illustrated. Vol. iv. Philadelphia: F. A. Davis Company, publishers. 1901.

This fourth volume is in keeping with those we have noticed before. Each subject is so carefully presented and the current literature so thoroughly reviewed that it is a delight to turn the pages of this handsome book. In this volume appears one of the latest contributions of the lamented Geo. H. Rohe, whose teachings upon insanity have been so far-reaching. There was never a period of "let down" in the life and work of Geo. Rohe.

The topic of "Malarial Fevers" is ably presented by Prof. Wilson and Dr. T. G. Ashton. It cannot but serve the profession of the South and West.

In the preface special attention is called to the articles on "Intubation," by Prof. Waxham; "Diseases of the Liver," by Prof. McPhedran, of Toronto, and "Meningitis," by Dr. C. M. Hay, but these are not more noteworthy than many of the other chapters. The subject of "Leprosy" is treated by Dr. Sajous himself, who has had exceptional advantages for studying this disease.

It is hard to review a book which is itself a review. The success with which this great work is meeting is a guarantee that it appeals to the best men in the profession. Physicians nowadays do not buy books unless they need them, and it is surprising to know how many physicians find they need this cyclopedia.

THE FOUR EPOCHS OF WOMAN'S LIFE. A Study in Hygiene. By ANNA M. GALBRAITH, M. D., Author of "Hygiene and Physical Culture for Woman;" Fellow of the New York Academy of Medicine, etc. With an Introductory Note by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania. 12mo volume of 200 pages. Philadelphia and London: W. B. Saunders & Company. 1901. Cloth, \$1.25, net.

The necessity of a better knowledge of womankind in those laws of nature which govern her physical being is generally acknowledged. But these laws are very complicated and the problem of presenting them to the laity in an intelligible way is a most difficult one. The greater must be our praise for the author who apparently has solved that problem. The subject is discussed in clear, comprehensible language, readily grasped even by those most unfamiliar with medicine. Specially noteworthy in this respect is the chapter dealing with the theories of menstruation and ovulation.

A careful medical examination of both sexes previous to marriage is a point worthy of consideration. We commend this book as of interest and value to every married woman.

THE DISEASES OF THE RESPIRATORY ORGANS—ACUTE AND CHRONIC. Arranged in two parts. By WILLIAM F. WAUGH, A. M., M. D. G. P. Engelhard & Co., Chicago. 1901.

This small work of 220 pages is devoted to diseases of the respiratory organs. The author gives as his reasons for introducing the work to the profession "that the treatment of acute affections of the respiratory organs has progressed far beyond that given in the text-books on practice," and then devotes two pages on hay fever. He suggests in its treatment that "possibly the attack could be prevented if the prospective patient wore a respirator charged with antiseptics or glycerin to prevent the access of the pollen." The author has a new and unique conception of the role played by the vaso-motor nerves in acute inflammations, and through this new knowledge expects to be able to attack disease "not only before the time when the diagnosis is usually made, but even before the malady has become fixed in the tissues." The work can hardly be considered compatible with the science of medicine.

A TEXT-BOOK OF PHYSIOLOGICAL CHEMISTRY. For Students of Medicine and Physicians. By CHARLES E. SIMON, M. D., of Baltimore, author of "Simon's Clinical Diagnosis," etc. In one octavo volume of 452 pages. Cloth, \$3.25, net. Lea Brothers & Co., Publishers, Philadelphia and New York.

This volume is intended primarily for medical students, both as a text-book and as a laboratory guide. It contains few references, and simply presents the most recent views and methods in physiological chemistry. The grouping of

the material is worthy of notice, and adds greatly to the clear presentation of the subject. The three great classes of food-stuffs, proteids, carbohydrates, and fats, form the subject of the first three chapters, and are followed by chapters on the chemistry of the ferments, digestive juices, digestive processes, and the excretions. The last half of the book considers in detail the physical and chemical characteristics of the fundamental tissues of the body and of the organs of the special senses. It is a valuable text-book.

THE PRINCIPLES OF HYGIENE. A Practical Manual for Students, Physicians, and Health Officers. By D. H. BERGEY, A. M., M. D., First Assistant, Laboratory of Hygiene, University of Pennsylvania. Octavo volume of 495 pages, illustrated. Philadelphia and London: W. B. Saunders & Company. 1901. Cloth, \$3.00, net.

This book presents a short and concise treatment of the subject in hand, and is intended for students of medicine and of architecture, and for physicians, as an aid in familiarizing themselves with the advances made in hygiene in recent years. It does not attempt to be exhaustive, but enters only into those phases of the subject which give the general principles upon which health officers and physicians work in dealing with conditions which are detrimental to health or which tend to improve it. The author devotes a greater proportion of space than has heretofore been given to industrial and school hygiene, and to military and naval hygiene. Into the important chapter on quarantine he incorporates the quarantine laws of the United States, together with the regulations for foreign and domestic ports and the frontiers of the country, and also the interstate quarantine regulations. It is well written, and very readable.

INTERNATIONAL CLINICS. Vol. II., Eleventh Series, 1901. Quarterly. Octavo, 304 pages. J. B. LIPPINCOTT COMPANY, Publishers, Philadelphia.

This volume of international clinics shares the excellent qualities of the series to which it belongs, and contains articles by a number of well-known writers, of which may be noted particularly: Surgical Analgesia by Injections of Cocaine into the Spinal Canal, by Tuffier; the Medical Preventive Treatment of Recurrent Hepatic Colic, by A. Chauffard; The Conservative Treatment of Appendicitis, by Broca; A Study of the Present Epidemic of Small-Pox, by Schamberg, of Philadelphia; A Resume of Actinomycosis of the Respiratory Tract, by Hektoen, of Chicago; The Relation of Osmosis and Ion Action to Clinical Medicine, by Sewall; the Etiology and Treatment of Internal Hemorrhages, by Douglas. Three studies in locomotor ataxia are contributed by H. S. Frenkel, M. Allen Staer, and Fournire, and a lecture by Cajal on the mechanism of mental operations. Blackader, of Montreal, writes on the acute dilatations of the heart in childhood and adolescence. Meade Bolten gives a critical estimate of the value of bacteriological examinations of drinking water.

ARBEITEN AUS DER PATHOLOGISCH-ANATOMISCHEN ABTEILUNG DES KOENIGLICHEN HYGIENISCHEN INSTITUTS ZU POSEN. Herrn Geheimrat Professor Dr. R. Virchow, zur Feier seines Achtzigsten Geburtstages gewidmet von Professor Dr. O. LUBARSCH. Mit 26 Abbildungen im Text und einer Tafel. Wiesbaden: Verlag von J. F. Bergman. 1901. G. E. Stechert, New York, agent. Price, \$2.25.

This volume is one dedicated to the great master, Virchow, in honor of his eightieth birthday. It represents a series of original investigations carried on in the pathologic-anatomic department of the Royal Hygienic Institute in Posen. The first article, written by Prof. Lubarsch, describes the manner in which the

pathologic department of this institute was founded and how it is conducted, with a description of the work done since its foundation. A series of affections which have been studied there is given by the writer, with statistics of the extent of the several processes, etc. Then follows a series of original articles by the different workers of the institute. One of the most interesting articles is that written by Lubarsch and his assistant, Mayr, entitled "The Investigation of the Effects of the Tubercle Bacillus on the Organism of the Frog." Another excellent article is that on the "Pathology of the Adrenals," by Rosenstein, in which a number of cases of Addison's disease were studied pathologically.

The volume is a valuable one, and forms an important and imposing addition to the current literature on pathology. The stamp of value of the book is the name of Lubarsch on its title-page, and certainly the reading of the text fully bears out the promise given by the name of this excellent pathologist.

ANLEITUNG ZUR DIAGNOSE UND THERAPIE DER KEHLKOPF, NASEN UND OHRENKRANKHEITEN. By Dr. RICHARD KAYSER, of Breslau, Germany. S. Karger, publisher, Berlin. G. E. Stechert, New York, agent. Price, \$1.00.

This little work of 128 pages embodies a series of lectures which the author has given in his post-graduate courses, and is intended solely for the general practitioner. Special attention is given to the various methods of examination. The text is very concise, but the illustrations are numerous. It is the first of the German publications to include the ear, nose and throat in one volume.

DIE THERAPEUTISCHEN LEISTUNGEN DES JAHRES 1900. A year-book for practitioners. By Dr. ARNOLD POLLATSCHKE. Volume xii. Octavo, 338 pages. Price, \$2.00. J. F. Bergmann, publisher, Wiesbaden. G. E. Stechert, New York, agent.

This year-book virtually forms a review of the important articles on therapeutics which have appeared during the current year, and affords a rapid grasp of the literature in question. Besides its alphabetical arrangement it has an index of authors and a subject catalogue. The abstracts are presented in a very readable style, and give a critical estimate of their contents. The printing is good, and the type is well chosen and easily read.

KURSUS DER MASSAGE. By Dr. LEOPOLD EWER, Berlin. 2d edition. Octavo volume of 183 pages, 78 illustrations. Price, \$1.25. Fischer's Medicin. Buchhandlung, Berlin. G. E. Stechert, New York, agent.

DER BAU DES MENSCHLICHEN KOERPERS: EIN LEITFADEN FUER MASSEUERE. By Dr. LEOPOLD EWER, Berlin. Octavo, 44 pages, 21 illustrations. Price, \$0.25. Fischer's Med. Buchhandl., Berlin.

GYMNASTIK FUER AERZTE UND STUDENTEN. By Dr. LEOPOLD EWER, Berlin. Octavo volume of 134 pages, 76 illustrations. Price, \$1.00. Fischer's Medicin. Buchhandl., Berlin. G. E. Stechert, New York, agent.

(a) The present edition, the second, has been divested of its anatomical section and the section on therapeutic gymnastics, each of which is published separately, as noted below. The greater space obtained in this way has been utilized by the author in incorporating into his book the recent advances in massage. The book contains a brief history of the development of massage, chapters on apparatus, on the physiological action of massage, and on the application of massage to the various diseases.

(b) The author gives a short, simple, easily comprehended statement of the essential points in the anatomy and physiology of the human body, for the use of masseurs. It represents the anatomical portion of the preceding volume, which the author was unwilling to burden with what could only be a synopsis.

(c) The present exposition of this subject is brief but to the point. The author makes a vigorous protest against indiscriminate and excessive gymnastics, and points out the benefits to healthy individuals of well-adapted exercises, both active and passive, conducted in moderation, and what a power for good properly chosen and well-directed exercises and movement may become, from a therapeutic standpoint. Besides articles on exercises for the thorax and in diseases of the chest, the chapter on educational exercises in *tabes dorsalis*, which have recently drawn much attention, and the one on deformities of the spine are satisfactory, and worthy of consideration.

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ORIGINAL ARTICLES.

BACTERIEMIA.

BY PROFESSOR DR. R. KRETZ,

PATHOLOGIST TO THE FRANZ JOSEPH HOSPITAL, VIENNA, AUSTRIA.

The knowledge that a *contagium animatum* circulates through the blood is much older than bacteriologic science, a fact which has been recognized by virtue of the simultaneous involvement of different organs in the same way in a given disease. A better grasp of the situation was given the pathologic anatomist through the researches of Virchow in regard to thrombophlebitis caused by bacterial invasion in the blood vessels and consequent metastatic formations. The mode of spreading of disease through the blood stream in this purely mechanical way was further demonstrated by the work of Weigert in which the relationship of tubercle formation in the venous walls and the consecutive miliary tuberculosis was demonstrated. Furthermore, Ponfick and Hanau showed that tuberculosis is propagated through the ductus thoracicus. More recently Albrecht and Ghon have shown how hemorrhages take place from the walls of veins which are in the neighborhood of plague buboes and thus permit the bacillary invasion. The anatomical knowledge concerning the relationship between bacteria and the blood requires, however, a supplementary investigation from the bacteriologic point of view, in order to permit a complete understanding of its multiform aspect. Obermayer, in 1873, discovered that in recurrent typhus there exists a pathogenic agent whose development occurs solely in the blood and for which the blood plays not merely the role of disease-carrier for the spirochaete, but, indeed, is itself actually the diseased tissue. This role of the blood in disease was likewise demonstrated in malaria. Painstaking investigations of Italian and English physicians brought about a correct understanding of the pathology of malaria, so that at the present time the epidemiology of this process stands upon a well-recognized scientific basis of practical clinical value. Of special interest to pathology is the spread of disease through the agency of insect-bites, thus producing disseminated disease throughout the blood stream without the production of a primary focus of infection. It has also been definitely established (through the researches of Beard and Lambel) that Malta fever (caused by the micrococcus melitensis of Bruce) may occur, after a typical period of incubation, as a purely cutaneous infection without visible local reaction. It may be mentioned parenthetically, that in typhus recurrens and exanthematicus experienced clinicians have assumed a conveyance of the disease by the agency of bites of fleas, bed-bugs, etc.

The list of purely hematic infections in which the pathogenic organism enters the blood and there undergoes dissemination is complete according to our present knowledge; for other bacteriemias, according to generally accepted views, the blood infection is a secondary manifestation of an anatomical primary infection elsewhere. This second mode of blood infection occurs frequently and in many varieties. It will be convenient to differentiate two principal types of blood disease: 1. Cases in which the micro-organic invasion is repeated at intervals, *e. g.*, metastatic suppurative processes and miliary tuberculosis. 2. Cases in which the blood infection is of great importance, as typhus abdominalis, anthrax, some cases of sepsis, and in bubonic plague.

The first category, which includes the metastatic processes, has been frequently described and hardly needs further mention except to call attention in passing to the fact that the role played by the leucocytes in the transportation of bacteria is of greater importance than has hitherto been believed. Wertheim has proved that in gonorrhea the leucocytes return to the blood stream laden with living and virulent micro-organisms, and thus produce a general infection. An identical mode of propagation from the primarily diseased nasal mucous membrane has been shown by Stricker to be true for the lepra bacillus. Probably isolated metastases in influenza and other infections should similarly be accounted for.

In the second class of cases the blood is something more than a mere vehicle for transportation. It is, indeed, affected so materially itself that its behavior is of interest from both the pathologic and clinical point of view. In plague, anthrax, septic and diplococcic bacteriemia, and in typhus abdominalis the blood becomes the seat of the bacterial process, and is more than an intermediary agent between the primary and secondary foci of disease. This type has, of course, been more carefully observed by clinicians and bacteriologists than by pathologic anatomists; for the reason that the germs in the blood produce no apparent or but slightly recognizable changes. While it is true that such infections may produce icterus or hemorrhages, the latter conditions may also be the result of the chemical action of the metabolic products evolved by living bacteria. Therefore a bacteriologic investigation alone offers a positive method of recognition. This kind of bacteriemia can be regarded as occurring typically in certain cases, *e. g.*, in typhus abdominalis. It may be relatively frequent in other infections, as anthrax, pyogenic infection, and bubonic plague. Finally, it may occur exceptionally. I recall several instances of the bacillus of diphtheria found in the spleen and kidneys, of the influenza bacillus in brain abscesses and endocarditis, and may remind you of gas phlegmon which in several cases brought a terminal inundation of the blood with micro-organisms.

The systemic invasion may not be due, as is the case in the classes above referred to, to the specific germ which produced the primary infection, but may be directly ascribable to a concomitant infection with another bacterium. In variola hemorrhagica, according to Paltauf's observations (which I can endorse), there may occur an early violent streptococcal invasion, while, during the state of suppuration, an inundation of the organism with staphylococci may bring about a fatal result. Similarly in scarlatina a general streptococcal infection may occur which indeed in many cases may be the direct cause of death. Less frequent, but well authenticated, are such secondary pyogenic blood infections in diphtheria, and in bubonic plague, in which disease they are of special diagnostic

significance. Furthermore, secondary bacterial invasion plays an important role in the ulcerative form of pulmonary tuberculosis. In most cases we are concerned with an infection by the pyogenic organisms which in severe hectic fever are partly responsible for the grave symptoms, and which, however, may be found in the blood even at the time of relative euphoria. It is noteworthy that even the presence of numerous living bacteria in the blood does not necessarily indicate an unfavorable prognosis in tuberculosis, an observation which Kobert in the sanitarium of Goerbersdorf ascertained. Concerning mixed infection in granular tuberculosis, a positive opinion does not seem to be warranted at the present time.

In the mixed secondary infections mentioned above we are concerned with an infection with bacteria which are characterized by their tendency to produce blood infection. Jehle, however, found in a large number of cases of scarlatina and measles the presence in the blood of influenza bacilli whenever they were to be found in the respiratory tract. The invasion of influenza bacilli into the blood is ordinarily a very unusual occurrence, but in cases of double infection with scarlatina and measles there occurs, apparently, a typical influenza bacteriemia. Recent literature contains several reports which confirm this finding, and some writers wrongly ascribe to these bacilli the role of specific causative factors of the exanthemata.

There can be no doubt that bacteriological examination of all cases of infection will bring about a far better understanding of this question. Double and secondary infections of this sort are, as has been emphasized by Babes, frequently met with epidemically. They deserve also the attention of the clinician who, in hospital work especially, may, through the early recognition of such a "combination," be able to prevent effectively their dissemination throughout the organism. Such a multiple infection often means a decidedly greater hazard to life than a simple infection.

It can thus be seen that an invasion of the blood by bacteria may assume a manifold aspect; first, the involvement of the blood without any primary local manifestation, as in malaria, Malta fever, and relapsing fever; second, typical blood invasion with local reaction at the site of ingress, as in typhoid fever or anthrax; third, the involvement of the blood through the medium of the leucocytes, as in gonorrhea and possibly also in leprosy; fourth, the blood may be infected by disease of the blood vessel wall, as in pus infections, tuberculosis and bubonic plague; finally, streptococci, diplococci and other organisms may enter the blood through the lymph stream. To these modes of invasion we must add the cases of bacteriemia which are due to a mixed infection, *e. g.*, the entrance into the blood of staphylococci, streptococci and influenza bacilli in small-pox, scarlatina and measles. We must furthermore add the various bacterial infections of the blood in tuberculous patients, apparently produced by the establishment of pathological communications into the circulatory system. This schematic division cannot, except for the pure hematic infections, be strictly adhered to, since in anthrax, bubonic plague, pus infection and tuberculosis the blood infection is not constantly typical, but only a more or less frequent occurrence, showing all possible degrees of variation from the entrance of a few germs, the presence of which is proved by solitary metastases, up to the overwhelming bacteriemia of pestis siderans. The blood infection is dependent on two factors: first, upon the nature of the bacterium, which depends in general on its biological charac-

teristics, and in particular on its degree of virulence or upon the association with other bacterial agencies; second, on the condition of the individual affected. This second factor presents itself in various ways. It is of importance to know which organ is primarily affected. For example, pulmonary anthrax and pulmonary plague infect the blood more readily than the same infection which has gained its entrance through the skin. Tonsillar pus infections are more dangerous than similar infections of the extremities. Or this factor may be dependent upon certain peculiarities of the diseased individual, for which we use the comprehensive but rather vague term, "individual disposition." This term, which has been evolved from the comparison of many careful observations, even in the light of recent investigation in the direction of etiology, does not gain in significance.

Precisely as pathological anatomy has, through its findings, differentiated conditions clinically apparently related, and recognized clinically different processes as related pathologically, and thus, in conjunction with clinical medicine, has broadened and deepened our pathologic knowledge as a whole, so has bacteriology taught us that different disease germs may bring about processes which are clinically and anatomically related. Erysipelas may be produced by streptococci as well as by staphylococci, bronchitis by diplococci and influenza bacilli, membranous inflammations by diphtheria bacilli and streptococci. The clinician and the anatomist have recognized the importance of this newer standpoint, and by more refined observation can to-day differentiate with a considerable certainty merely from the appearance of the sputum and post-mortem findings whether a pneumonia is caused by the diplococcus or by the bacillus pneumoniae, or whether the influenza, the plague bacillus or the bacterium coli communis lie at the bottom of the process.

Up to the present time the anatomist has not advanced to an equal skill in the macroscopic recognition of bacteriemia. Signs of a secondary propagation of the pathologic process enable him to draw conclusions as to a preceding bacteriemia, a fact which was first recognized and emphasized by Ponfick in typhoid fever. In general the criteria of blood infection are very defective. Splenic tumor is only in certain processes sufficiently characteristic to permit even a well-trained examiner to draw conclusions as to the nature of the disease process. Concerning the alterations of the most important blood source, the bone marrow, we still know very little, in spite of many interesting and important reports. Other signs of an infection, as degeneration of the parenchymatous organs, capillary hemorrhages, etc., etc., present nothing especially characteristic with reference to the bacterial inundation of the blood, although in special instances, as bubonic plague, hemorrhages occur and are undoubtedly connected with the blood infection. In a post-mortem in such a case the careful observer, however, will note various suggestive points. Thus, in septic and diplococcus infection, an especially early appearance of post-mortem imbibition of the intima of the greater vessels suggests the presence of bacteria in the blood. Or we may be led to assume this condition by an incongruity between the relative unimportance of the anatomical lesions and the ensuing fatality; for instance, in scarlatina influenza bacteriemia can be assumed (if the thymus gland is not found abnormally large). But all these conclusions are decidedly indefinite and based entirely upon personal judgment. Only bacteriological examination will yield a result of scientific worth.

The compilation of a series of anatomical and clinical observations from the

standpoint of etiology presents an extraordinary multiformity of clinical and anatomical pictures of an etiological unity. The pyogenic streptococci may exist in the oral cavity as harmless parasites; they may, on the other hand, produce localized or progressive inflammations ending in a *restitutio ad integrum* (erysipelas), or finally cause a suppurative tissue disintegration with subsequent scar formation (phlegmon); they may bring about a local necrosis in addition to a suppurative inflammation (ulcerative endocarditis and osteomyelitis); they may invade the blood by way of the lymph stream and produce distant metastases, *e. g.*, in the joints; they may attack the vascular walls and form thrombi. Disintegrating thrombi form either emboli in distant organs or may lead to death under the picture of a fulminating sepsis or an acute atrophy of the liver (Favre and Babes), the blood being inundated from an insignificant focus. The same bacteriemic infection may run a milder course in the form of articular rheumatism, which Singer, in a large proportion of cases, correctly describes as a mild form of pyogenic mycosis.

Bubonic plague runs its course as a localized infection accompanied by symptoms of toxemia, more frequently with a subsequent bacteriemia of greater or less severity; it may, however, show a tendency to form metastases. In anthrax the invasion of the blood occurs without metastases. In malleus metastases occur typically. In tuberculosis there is very often a formation of metastases along the course of the blood vessels, producing miliary tuberculosis. In an influenza infection metastases occur extremely seldom, but when combined with scarlatina and measles, this same germ produces a typical bacteriemia. In typhoid fever, infection of the blood is a constant finding, metastases being relatively rare. In phlegmon due to gas-producing bacteria, both toxemia and bacteriemia occur coincidentally.

From this short resumé we see that infectious intoxication, the formation of metastases, and bacteriemia may vary widely. Based upon older views of the variety of infections following inflammations, there have been created the terms "sepsis" and "pyemia," and processes, in part analogous, have been denominated by these terms, *e. g.*, septic diphtheria and pyemic form of bubonic plague. On the other hand, there have been advanced other descriptive terms for this same kind of metastasis-formation, as general miliary tuberculosis and miliary pulmonary malleus. Although this terminology has historic foundation, I am of the opinion that, according to our knowledge of to-day, we should replace the older terms "septic" and "pyemic" by the more intelligible expressions: local infection with subsequent toxemia, or inflammation bringing about metastases. In addition to the latter, the term bacteriemia may be applied to a special form of blood infection, for the description of which there is no name in our terminology. For scientific investigation and teaching purposes, a good terminology is of the greatest importance. Accurate definitions facilitate correct understanding of similar and differing features of the individual case and permit the investigator a comprehensive survey of the field.

TUBERCULOSIS OF THE CHOROID: TUMORS OF THE CHOROID.

BY JAMES MOORES BALL, M. D., of St. Louis, Missouri,

PROFESSOR OF OPHTHALMOLOGY IN THE ST. LOUIS COLLEGE OF PHYSICIANS AND SURGEONS.

Tuberculosis of the Choroid may be in the form of miliary tubercles accompanying general acute tuberculosis, or as large masses in chronic tuberculosis. In *miliary tubercle* a few tubercles (one to ten) are found in the macular region, measuring from one-third to two-thirds the diameter of the optic disc, and presenting a pale-rose or grayish-yellow color, resembling the spots seen in disseminated choroiditis. They usually occur in both eyes. At first, a small pigment spot, slightly more prominent than the remaining parts of the fundus, will be seen; this is due to a slight bulging of the pigment layer over the tubercle. Soon the pigment undergoes absorption, leaving the tubercle visible as a small mass of the color mentioned above. The tubercles in this form of the disease appear a few hours or days before death—hence they cannot be mistaken for the elevations of disseminated choroiditis. They begin in the deeper layers of the choroid, growing from the adventitia of the vessels. They do not affect the vision. In many cases they can be demonstrated by microscopic section in eyes which present no changes to the ophthalmoscope. In probably eighty per cent. of cases of miliary tuberculosis their presence can be demonstrated. They bear no relation to tubercular meningitis. Gowers and others believe they are less frequent in tubercular meningitis than in general tuberculosis without meningitis. The presence of tubercle bacilli cannot always be demonstrated in these cases. The larger tubercles show giant cells with a reticulum of fibers, small-cell infiltration and caseation. The smaller growths are collections of lymphoid cells between the vessels. Since this disease appears very late in an incurable malady, treatment is valueless. The presence of tubercles in the choroid may assist the physician in making a diagnosis between acute miliary tuberculosis and typhoid fever.

A Large Tubercular Mass often presents the clinical picture of a sarcoma of the choroid. It is probably always secondary to tubercle elsewhere, although the latter may defy localization. The disease is usually unilateral. The patient may early show a destructive inflammation of the globe with perforation, or the disease may cause no symptoms and be accidentally found by ophthalmoscopic examination. In a few cases glaucoma appears. Since the disease occurs chiefly in children and young subjects, it may be mistaken for neuroepithelioma of the retina. There is much variety in the ophthalmoscopic appearances of this disease. The tubercular mass usually appears as a solitary white or grayish elevation springing from the central part of the fundus. It is to be distinguished from leucosarcoma of the choroid, neuroepithelioma of the retina, and subretinal cysticercus. The absence of vessels serves to exclude the first and second conditions, while its immobility and solidity will distinguish it from cysticercus.

Since the tubercular tumor is secondary to tuberculosis located elsewhere, the removal of the eye is not demanded at an early stage, provided the diagnosis is clear. If it is in doubt, the eye should be removed and subjected to microscopic examination. Cases of tubercular tumor which are progressive and tend to perforate should be treated by enucleation. The general treatment of the patient is of great importance in these cases. After a successful operation the patient may die from tuberculosis of the meninges, lungs or abdominal viscera.

Carcinoma of the Choroid is of rare occurrence, about thirty cases having been reported. The disease is always metastatic. The rarity of metastatic growths in the eye is accounted for by anatomic conditions—the small size of the ophthalmic artery, and the fact that it is given off from the internal carotid at an angle of ninety degrees. Metastasis is more common in the left eye than the right, owing to the difference in the carotids. The left carotid receives emboli more easily than the right, inasmuch as it arises from the aorta directly. Metastatic growths occur most often at the posterior pole of the eye, owing to the greater caliber of the short ciliary arteries. Lagrange,¹ of Bordeaux, states that metastatic carcinoma of the choroid is usually a bilateral disease, and that it always shows itself first in the macula region. Of nineteen cases mentioned by Lagrange in a paper presented to the Paris Ophthalmological Society in 1898, in sixteen the primary carcinoma was situated in the breast, once in the stomach, and twice in the lungs. In five of these cases the disease was present in both eyes when the patients first came under observation; in two the second eye became involved within a few weeks; in the cases in which one eye only was attacked, the left eye was the affected organ. In three cases only the right eye was the primary seat of the disease. The prognosis is unfavorable, the patients usually dying within one year after the appearance of the disease.

Other Tumors of the Choroid.—Aside from the occurrence of carcinoma and the solitary form of tubercle, which have been considered, the choroid is at times the seat of sarcomata, myomata, cysts and nevi. Sarcomas occur either primarily or by metastasis. They belong to the middle period of life, being rarely seen before the thirty-fifth year. Some are white (leucosarcomata), while others are black (melano-sarcomata). Their tendency is to grow out of the globe in three directions: (1) along the course of the *venae vorticosae*; (2) along the optic nerve to the brain; and (3) to the corneoscleral junction, where they perforate. Their microscopic appearance is variable, and more than one type of structure may be found in the same growth. The small round-cell and spindle-cell are common; angio-sarcoma, telangiectatic sarcoma, adenoma and enchondroma are very rare choroidal growths.

Sarcoma of the Choroid.—This is a rare disease, being found in the proportion of about 1:3000 ophthalmic cases. In the vast majority of cases the growth is primary. However, the author has met with one case of choroidal sarcoma sequent to a sarcoma of the leg, and another metastatic case was observed by Meigs and De Schweinitz, in which the primary growth was located in the mediastinum. Doubtless metastatic sarcoma of the choroid occurs more frequently than is supposed, since in many cases of general sarcomatosis the eyes are not examined. The primary intraocular growth is usually single and unilateral, and usually is in the form of a projecting knob, growing toward the center of the eye, and presenting a neck and base. Sarcoma may appear as early as the fifteenth or as late as the eighty-fourth year, although most frequent between the ages of forty and sixty. The disease is more common in males than females (Fuchs, A. Hill Griffith, Lawson); but Kerschbaumer states that sex is without influence in the causation of intraocular sarcoma. The cause of the disease is not known. After removal of the eye the disease often becomes metastatic, invading any organ or tissue, not excepting the bones. The brain is rarely involved by extension along the optic nerve. A rare complication is pigmentation of the skin either in the form of a diffuse dark color suggestive of argyrosis, or in the form

of small, discrete round spots, two to four mm. in diameter, which may be too numerous to be counted.

SYMPTOMS.—The symptoms vary much in different stages of the disease.

1. In the first stage the patient complains of a defect in the field of vision. On examination a detachment of the retina is seen at the site of the tumor. The mass appears of a purple-red or slate color, according to its pigmentation. If deeply pigmented it may appear black. Blood vessels are seen coursing over it. There is no pain and the tension is normal. The defect in the visual field may take a hemianopic shape or be quite irregular. Vision in the first stage may be only slightly or considerably reduced, according to the proximity of the growth to the macula. The duration of the first stage is from one to two years.



Fungating Sarcoma of the Choroid.

2. In the second stage there is increase of tension, while the external appearance of the eye resembles that found in inflammatory glaucoma: the anterior chamber is shallow, the pupil dilated, the cornea cloudy, and dilated episcleral vessels are seen. If the media are clear, a detached retina is seen. Later the lens becomes opaque and the clinical picture is that of absolute glaucoma. Pain now sets in and makes the glaucomatous picture so striking that experienced diagnosticians have been deceived.

3. In the third stage the tumor escapes from the globe, the symptoms varying according to the place of exit. If in front, dark nodules are seen about the corneoscleral region; if behind, the existence of perforation cannot be told until the growth produces exophthalmos. Pain is relieved by the perforation of the globe. The growth of the sarcoma then proceeds with startling rapidity. The

tumor fills the orbit and causes a projection as large as two fists. The exposed parts of the mass ulcerate and bleed; the deeper portions may grow into the brain.

4. In the fourth stage metastatic nodules form in the internal organs, the liver, stomach, and mesenteric glands being favorite sites. The patient dies of exhaustion. The first and second stages may comprise several years; the third and fourth stages are measured by months.

DIAGNOSIS.—In making a diagnosis of sarcoma of the choroid the following conditions must be reckoned with: (1) detachment of the retina and choroid; (2) neuroepithelioma of the retina; (3) solitary tubercle of the choroid; (4) intraocular cysticercus; (5) glaucoma; (6) spontaneous rupture of the eyeball; (7) iridocyclitis; (8) syphilis, with choroidal exudation.

1. (*a*) RETINAL DETACHMENT caused by sarcoma of the choroid differs from the simple variety in that in the latter the retina, early in the history of the case, is transparent, owing to the absence of the color given to it by the choroidal pigment. Spontaneous retinal detachment is preceded by *muscæ volitantes*, appears suddenly, and is accompanied by vitreous opacities, reduced tension, signs of choroiditis, and often occurs in eyes which are highly myopic. The condition of the other eye as regards refraction, the condition of fundus, and the history of the case, are of some diagnostic value. Holden says that simple retinal detachment extends to the ora serrata, while in tumor detachment is long delayed, particularly when the tumor is in the ciliary body or posterior pole of the eye. The detachment in the simple form tends to produce folds and show undulations on movement of the eye, while in tumor folds are generally absent, and the mass does not undulate.

At times, however, cases occur in which serum collects between a sarcoma and the retina, thus simulating simple detachment and making the diagnosis exceedingly difficult or impossible.

In some of these cases where the retina is not thickened and the sarcoma is rich in vessels, the tumor may be recognized by the presence of vessels which are neither choroidal nor retinal. As a rule, a large detachment of the retina pressing against the lens will be due to an underlying sarcoma. Tension is a valuable diagnostic point. In retinal detachment due to a serous collection it is generally decreased; in choroidal sarcoma it is usually normal at first and becomes increased later. A dilatation of the anterior ciliary veins localized to one part of the globe indicates sarcoma, the growth interfering with the return of the blood through one of the *venæ vorticosæ*.

In melano-sarcoma the urine sometimes contains melanin. Urine containing melanin turns black on the addition of perchloride of iron.

Bellarminoff's device may assist in making a diagnosis. The eye being anesthetized, a piece of moistened plane glass is pressed against the cornea, thus causing it to become flat and eliminating its refraction. By using strong illumination the opaque sarcoma may sometimes be recognized beneath the detached retina.

In case of doubt, the diagnosis resting between sarcoma and retinal detachment, Hirschberg proposed to puncture the eye. If a sarcoma is present, blood will be drawn; if the case is one of detachment, only serous fluid will be obtained. Hirschberg, however, has abandoned this procedure. Schultz² objects to it on the ground that it is uncertain, and, furthermore, it may furnish a path

by which extraocular extension may occur. In any instance of doubtful diagnosis, the vision being markedly reduced or entirely lost, an enucleation will be justified, on the ground that it is better to remove a dozen useless eyes with retinal detachment than to leave a case of choroidal sarcoma till the third stage is reached.

(b) DETACHMENT OF THE CHOROID presents even more problems in differential diagnosis. It forms a circumscribed projection, standing out prominently upon the fundus like a sarcoma. The foldings present in simple retinal detachment are absent in detachment of the choroid. Usually in choroidal detachment there is hemorrhage, and choroidal vessels can be recognized beneath the retinal vessels. Fortunately the condition is extremely rare.

2. NEUROEPITHELIOMA OF THE RETINA.—Here the age of the patient is of importance. Neuroepithelioma is found only in children; while sarcoma of the choroid may occur in childhood, such cases are exceptional. If the media are clear, a diagnosis between neuroepithelioma and sarcoma is usually not difficult. The former presents a yellowish-white tumor. A sarcoma, if pigmented, looks much different. In a later stage, when glaucomatous symptoms arise, diagnosis will be difficult.

3. SOLITARY TUBERCLE OF THE CHOROID may be mistaken for leucosarcoma. Tubercle, however, does not show vessels and occurs for the most part in young tubercular subjects.

4. INTRAOCULAR CYSTICERCUS is of such rare occurrence in this country as to demand no consideration. In the early stages, before the advent of inflammatory symptoms, the picture of cysticercus is characteristic and can hardly be mistaken for sarcoma.

5. GLAUCOMA.—The differential diagnosis between sarcoma of the choroid and acute inflammatory glaucoma which has been untreated may be impossible. The author once made an iridectomy for the relief of pain for what was diagnosed as glaucoma absolutum. Improvement was but temporary; the pain returned, and in a few weeks an enucleation showed the case to be sarcoma of the choroid. In such a case the media are opaque, the eye is hard, the episcleral vessels dilated and the pain severe. It will rarely happen in glaucoma that one eye will be entirely blind and the other normal.

6. SPONTANEOUS RUPTURE OF THE EYEBALL, of which the author has observed one case, and Gilfillan³ has recorded another, presents a picture identical with that found in the third stage of sarcoma of the choroid. The history of the case and the excessive rarity of spontaneous rupture will serve to clear the diagnosis.

7. IRIDOCYCLITIS.—Here the chief difficulty arises because of clouding of the media, occlusion of the pupil, and opacification of the lens. It sometimes occurs that in the course of its growth a choroidal sarcoma will cause choroiditis and iridocyclitis of such intensity as to lead to phthisis bulbi. In a case of idiopathic iridocyclitis both eyes are frequently affected. Tension is usually reduced, while in sarcoma tension is usually increased after the period when the media are clouded. In traumatic iridocyclitis the history of the case will clear the diagnosis.

8. SYPHILIS.—Post¹ has recorded a case of sarcoma occurring in a myopic syphilitic subject. There were floating opacities in the vitreous, and a projecting mass between the macula and optic nerve-head. No improvement followed

antisymphilitic remedies. The eye was enucleated and found to contain a leucosarcoma of the spindle-cell type. In this connection it may be stated that Silcock⁵ has reported a case of gumma of the choroid.

PATHOLOGY.—Sarcoma of the choroid usually is a firm tumor, but is sometimes gelatinous, and may undergo fatty, myxomatous, osseous or cartilaginous degeneration. Histologically it consists either of round or spindle cells, or a mixture of both. It arises either from the outer or middle layers of the choroid, and its tendency is to grow inwards towards the vitreous. Rarely the tumor is flat. Its common form is spheroidal as long as its choroidal covering is intact. Later it breaks through the lamina vitrea and assumes a spheric shape. In its growth it detaches the retina throughout a large area, but at the apex the tumor and retina are intimately attached. Following the detachment comes a stage of inflammation in which either glaucoma or iridocyclitis is set up, the latter leading to phthisis bulbi. The stage of extension follows, the tumor spreading along the optic and ciliary nerves, or along the course of vessels entering the globe. Nodules form in the orbit, and thus exophthalmos is produced. Metastases form in distant organs by embolism, the blood current detaching and carrying the cells to other parts. While local recurrences are unusual after cases operated upon at an early stage, metastases sometimes occur long after the removal of the eye. Sarcomas of the choroid belong mostly to the pigmented tumors (melano-sarcomata). The leucosarcomas are rare.

PROGNOSIS in choroidal sarcoma is always grave, and if the tumor mass has reached the third stage it is generally absolutely bad. An early diagnosis and thorough operation made in the first or second stage will save about forty per cent. of these cases. The danger of return under such circumstances is small, but the liability to the development of metastases is great. These usually appear within six months after enucleation. If the patient remains well for four years after operation the immunity is probable, but not assured. In untreated cases the duration of life is said to be about five years. The prognosis is more favorable in spindle-cell sarcoma than in the round-cell variety.

TREATMENT.—Only surgical procedures are of value in choroidal sarcoma. If the tumor has not passed beyond the second stage, an enucleation with complete resection of the orbital part of the optic nerve, its membranes and the surrounding tissue at the apex of the orbit will be sufficient. If there is doubt about the second stage being past, or if the tumor has undoubtedly passed beyond the globe, a complete removal of the orbital contents must be effected. A bistoury, forceps and scissors are the only instruments necessary. The author believes that with the modern methods of operating the use of caustics in the orbit should be prohibited. In operating on cases in the third stage the aim of the surgeon is more to relieve pain and destroy fetor than to save life. Here the hypodermatic injection of the toxins of erysipelas and bacillus prodigiosus may be tried. In the fourth stage treatment is useless except to relieve pain.

Myoma of the Choroid.—Although the interior of the eye is well supplied with material for the growth of muscular tumors, few cases of ocular myomata are on record. This form of tumor has been found several times in the choroid. In the case of Guiata,⁶ of Siena, the diagnosis rested between a subretinal cysticercus and choroidal neoplasm. The patient was a man aged twenty, whose vision had been failing for several months. The ophthalmoscope showed a rounded elevation downward and inward 4 mm. from the corneal margin. Repeated ex-

aminations failing to show movement in the mass, the diagnosis of choroidal tumor was made and an enucleation performed. The tumor measured 8 by 5 mm., and extended from the ora serrata to the equator. On microscopic examination it was found to be a myoma of the choroid.

3509 Franklin Avenue.

REFERENCES.

¹ *Medical Press and Circular*, March 23, 1898.

² *Klinische Monatsblatt fuer Augenheilkunde*, May, 1900.

³ *Medical News*, January 25, 1902.

⁴ *St. Louis Courier of Medicine*, August, 1900.

⁵ *Transactions of the Ophthalmological Society of the United Kingdom*, vol. xix. (1899), p. 69.

⁶ *Annali di Ottalmologia*, fasc. i., 1895.

SMALL-POX—THE PRESENT EPIDEMIC.

BY A. W. BRAYTON, M. D., of Indianapolis, Indiana.

The small-pox of the Middle West affords a remarkable instance, unparalleled perhaps in the history of contagious diseases, of a loathsome plague so modified that its morbidity and mortality is less than that of any other of its allies except possibly chicken-pox and German measles.

For we are now dealing with the type of small-pox so graphically portrayed in Macaulay's "History of England," in the chapter on "The Death of Queen Mary," in 1694—"That disease over which science has achieved a succession of glorious and beneficent victories, but which was then the most terrible of all the ministers of death. The havoc of the plague had been far more rapid; but the plague had visited our shores only once or twice within living memory, and the small-pox was always present, filling the churchyards with corpses, tormenting all whom it had not yet stricken, leaving on those whose lives it spared the hideous traces of its power, turning the babe to a changeling at which the mother shuddered, and making the eyes and cheeks of the betrothed maiden objects of horror to her lover."

Such was English small-pox up to the time of Jenner and a century after the death of Queen Mary. "We know," says Lorain, "the date of Jenner's first vaccination as we know the date of a great battle." It was May 14, 1796, when Jenner vaccinated the arm of the eight-year-old boy James Phipps from virus taken from the hand of the dairy-maid Sarah Nelmes, who was infected from her master's cow. And with native Gallic instinct he cites the anecdote of the Duchess of Cleuelard, whose position in the service of Charles II. was in close dependence on her beauty. She replied to the courtiers who were joking on the possible loss of her occupation, through the disfigurement of small-pox, that "she had nothing to fear for she had had the cow-pox." This quotation from Brovarded, in the *Twentieth Century Practice*, indicates no lubricity, but only the light and delightful French gaiety which enlivens their most serious scientific writings.

Before Jenner's time small-pox was a social and vital issue, penetrating every phase and grade of domestic and civic life, reaching from the hovel to the throne, and by its death and disfigurement appealing to the common classes as the less evident results of syphilis and gonorrhea appeal to-day to the profession of medicine. The great mortality of Anglo-Saxon countries is now mainly due to pneumonia, tuberculosis, and typhoid fever; the "Captains of the Kings

of Death," to quote the vivid expression of John Bunyan. And yet the people have little fear of these diseases; they accept them as in the way of nature and Providence. But small-pox, wherever at its rife, revives in the community its old historic terror, although we may control it more absolutely than any other known contagious disease, if public sentiment and intelligence enforce as they should vaccination and revaccination.

There is now growing up in the profession, among the laity, and in legislative bodies, the belief that by proper hygiene and sanitation the ravages of the "great white plague," tuberculosis, which destroys from one-fourth to one-fifth of the people, may be stayed. But it has no such hold on our profession as the knowledge and belief that vaccination modifies small-pox, and that universal vaccination and revaccination will absolutely prevent it in any community or nation. And only by insistence on this belief can the disease be suppressed or even controlled.

The people must be made to know that "no degree of cleanliness of the individual, or of hygiene in the household, or of municipal sanitation, will protect the susceptible against contracting small-pox if exposed to the contagion. The one certain and only safeguard, tested by the experience of the century since Jenner, is 'effective vaccination.'" We all know the old and familiar statistics which prove that vaccination prevents small-pox. These statistics should be kept before the people; they should be treasured in every doctor's mind and instantly ready to his tongue.

These are the immense benefits that the revaccination law of 1874 conferred upon the German nation by controlling the ravages of small-pox.

"In 1871, with a population of 50,000,000, she lost 143,000 lives by small-pox, whereas through the effective working of the law of 1874 the mortality decreased at such a rate that now the disease claims but one hundred and sixteen victims in the year. In 1870-71, during the Franco-German war, the two people interpenetrated each other, the German having its civil population vaccinated optionally, but its army completely revaccinated, while the French (population and army alike) were vaccinated perfunctorily. Both were attacked by small-pox, but the French army numbered 23,000 deaths by it, while the German army had only two hundred and seventy-eight; and in the same tent, breathing the same air, the French wounded were heavily visited by the disease, while the German wounded, having been vaccinated, had not a single case."

The most noted, as it is the most modern and instructive of American epidemics was that of Montreal, lasting from June of 1885 to May of 1886, with a total of over 10,000 cases, and a mortality of 3209, or over thirty per cent. The only reason that small-pox is not slaying its thousands in New York to-day is that the great majority of the people are vaccinated and that vaccination is compulsory upon school children.

But in Montreal small-pox was implanted in a virgin soil, as there had been no compulsory vaccination for ten years. It was among the children most deaths occurred. Of 3164 deaths by December 31, 1886, five hundred and thirty-one were less than a year old; six hundred and eighty-one under ten years, and four hundred and forty-seven over ten years of age. That is, this slaughter of the innocents amounted to eighty-six deaths out of every one hundred, of children under ten years, the very age at which, in efficiently vaccinated communities,

the deaths are always at a minimum. Most of the deaths were in the summer months; season had no influence.

All of these cases resulted from the conductor of a Pullman car from Chicago, where small-pox then existed. He was admitted to the Hotel Dieu, a large general hospital, harboring two hundred patients, February 25, 1885, with the diagnosis of chicken-pox, and was discharged cured in three weeks. Two days later one of the servants had small-pox, and by the middle of April, there were sixteen cases. By this time the municipal hospital for infectious diseases was made ready for the small-pox patients, and all those not affected, over one hundred in number, were sent home in order to thoroughly disinfect and purify the now infected Hotel Dieu.

And so the seeds of the disease were spread broadcast through Montreal. Early in June crowds of people gathered in the procession of the "Fete Dieu," and again great crowds assembled at the funeral of the Roman Catholic Archbishop. Soon after these three events the cases increased rapidly in numbers, forty-six dying in July, and two hundred and thirty-nine in August. The fear of death lay hold of the people; hospital accommodation was provided, vaccination vigorously enforced, and removal to small-pox hospitals made compulsory. By a section of the ignorant classes these measures were opposed, riots ensued and the police stations and other municipal buildings attacked and much property demolished. The rioters were subdued by the police, aided by the growing death-rate, and by November and December 80,000 people, one-half of the total population, had been vaccinated, and the disease began to abate. Seventeen hundred houses were under police control; two hundred thousand dollars in money had been expended by the health committee, and the loss to trade and commerce and by sickness and death was inestimable.

The lesson of this great epidemic is that small-pox, once started in an unvaccinated population, has lost none of its old powers to maim and to slay, and is as virulent now as in the reign of William and Mary. New York City, if not thoroughly vaccinated, would to-day be repeating the history of Montreal, its trade destroyed and its ports closed to the commerce of the world.

The Montreal epidemic also shows the absolute importance of prompt notification of contagious diseases to the health authorities, and the necessity of always having ready in every city and county seat good and sufficient accommodations for separating at once the infected persons from the rest of the community. Finally, those "Benignant Autocracies," as Editor Shrady, of the *New York Medical Record*, has designated municipal health boards, should be clothed with ample powers for compulsory removal whenever the public interest requires it, and the disinfection or destruction of infected material and premises, and the supervision of persons who have been exposed to contagion.

In the various States of our Union there is little co-operation for the suppression of contagious diseases. The inhabitants of Porto Rico, under military rule, have been vaccinated, and are safer from epidemic small-pox than the people of St. Louis. The health officers of our cities would do well to follow the method of Dr. Reynolds, the efficient health commissioner of Chicago, who has caused to be widely circulated and voluntarily signed by physicians and influential citizens a "Vaccination Creed" which reads as follows:

"We, the undersigned, hereby publicly profess our firm belief, based upon

positive knowledge gained through years of personal experience and study of small-pox and vaccination:

1. That true vaccination, repeated until it no longer "takes," always prevents small-pox. Nothing else does.

2. That true vaccination—that is, vaccination properly done on a clean arm with pure lymph and kept perfectly clean and unbroken afterward, never did and never will make a serious sore.

3. That such a vaccination leaves a characteristic scar, unlike that from any other cause, which is recognizable during life and is the only conclusive evidence of a successful vaccination.

4. That no untoward results ever follow such vaccination; on the other hand, thousands of lives are annually sacrificed through its neglect—a neglect begotten of want of knowledge."

It would be well also to publish often the report of the English Royal Small-pox Commission appointed by the Queen in May, 1889, and which reported in 1896, after seven years' work, one hundred and thirty-six meetings, the examination of one hundred and eighty-seven witnesses and the investigation of six notable English epidemics. Upon this committee were the late Sir James Paget, Sir Wm. G. Hunter, Sir Wm. Savoy, Prof. Michael Foster, Dr. J. S. Bristome and Mr. Jonathan Hutchinson—a most notable array of knowledge and talent.

Their voluminous report brings the old well-known facts and figures in evidence. They show that in all the epidemics vaccination had been neglected: that sixty-four to eighty-five per cent. of the births had not been accounted for by the public vaccinating officers; that two-fifths of the unvaccinated who had small-pox died, while of the vaccinated less than four per cent. died.

The Commission reported that vaccination diminishes the liability to small-pox; that it makes the disease less fatal and of a mild and less disfiguring type; that the protection covers a period of nine or ten years; that vaccination restores the protection which lapse of time diminishes especially among the young, and that the protection is in proportion to the size and number of the scars.

These conclusions of the English Royal Small-pox Commission should be frequently reiterated in the medical and lay press, taught to medical students as the last and highest word of science in regard to the efficacy of vaccination, and should guide our advice and practice even in dealing with the present mild epidemic of our Western and Middle States.

The physician should also be prepared to meet on scientific grounds the opponents of vaccination, not merely the anti-vaccination pamphlets and monthlies which hail from Boston and the societies which circulate literature in the alleged defense of dumb animals and in opposition to scientific experiment under the guise of humanity, but also the writings of such men as Wallace, who discovered contemporaneously with Darwin the doctrine of organic evolution. The physician must be able to cope with his often quoted but weak article in the British Encyclopedia which damns vaccination with faint praise.

Let the physician prepare himself by the lucid text of Osler's "Practice;" by the vivid and extended article of the lamented Whittaker of Cincinnati in Pepper's "System of Medicine;" by the Milroy lectures of Monckton Copeman in "Vaccination: Its Natural History and Pathology." And he may go back to the epoch-making treatise of Jenner of a century ago, entitled "An inquiry into

the causes and effects of the variola vaccine, a disease discovered in some of the western counties of England, particularly Gloucestershire, and known by the name of Cow-Pox."

One may even read the Rider Haggard novel, "Dr. Theme," which in plot, language and locality is an eloquent and impassioned defense of vaccination, and an effectual counterblast to the English anti-vaccinationists. Not only this brilliant novelist, but the many-minded Kipling has placed his intellectual imagery at the service of the followers of Jenner.

And again let us commend and reread the sane, lucid and fervid article of Dr. John William Moore in the thirteenth volume of the *Twentieth Century Practice*. It is a marvel that so much is condensed in a hundred pages, so well classified, so pleasant in style, so convincing in its conclusions.

The peculiar characters of the present epidemic, occupying over three years of time, covering one-half of the North American continent, and including nearly forty millions of people, has been so well described by Welch of Philadelphia, Hyde of Chicago, Leroy of Nashville, Probst of Ohio, and numerous other health officers and epidemiologists, that it hardly seems necessary to go outside of our own territories except for historical details and the facts necessary to establish the relations of our "modified" or "mitigated" small-pox with the virulent plague as known and regarded for ten centuries past.

The ever-present danger of small-pox before Jenner's time is shown in the pages of an old private diary, quoted by Copeman. It reads as follows: I came on a curious passage in the letter of Mrs. Waller to her son, about his seven-years-old daughter. She wishes to know what dowry he is prepared to give. "I am not in haste to marry her, she is young enough to stay, but the danger is if she should catch the small-pox, or her beauty should change, it would be a great loss to her." Pepys is full of references to the horrors of small-pox, but I have never met with a passage that brings so keenly home the nearness of the risk of small-pox to early English home life.

In this connection also may be mentioned a record of epidemic of small-pox in the English town of Ware, in 1722. The population 2515, of whom 1601 are stated to have had small-pox before, and therefore only nine hundred and fourteen were susceptible to the disease during the course of the epidemic. Of these nine hundred and fourteen persons, six hundred and twelve were attacked and seventy-two died. The remaining three hundred and two persons who escaped the attack are spoken of in the town record in quaintly dogmatic fashion "as persons who are yet to have the small-pox." That is, everybody in England before vaccination times was expected to have small-pox.

To obtain an illustration of the full effects of an invasion of small-pox in a community where it has never existed, and therefore there is no general immunity resulting from former epidemics, we must look to some isolated locality which has escaped invasion. In illustration of this point we may take the case of Iceland, where from 1707 to 1709, out of the total population of 50,000, no less than 18,000 persons died of this disease.

The characteristic features of small-pox as it has manifested itself in New York City and vicinity the last two years, and which my son, Dr. Nelson D. Brayton, had excellent opportunities to observe during his service as resident physician for six months of 1901 in the small-pox hospital of North Brothers Island, may be worthy of mention for comparison. Speaking of the symptomatology of

the disease in a recent article in the current issue of the *Indiana Medical Journal*, he emphasizes the severity of the affection as it has existed in New York. From his paper I quote:

"Various theories have been advanced in New York to account for these phenomena, one of the most plausible ones being that the milder type now so prevalent in the West is an attenuated type of the disease; a tail end of a much severer epidemic which had already run its course, seen its day, and spent its fury in the far South, notably in Mexico and the West Indies. Here it infected some of our Spanish-American troops and on their return was scattered broadcast.

"A widely different condition pertained in the East. There a great sea-port city, New York, had been entirely free from the disease, while for over a year and a half it had been common in Western States. But, without warning, the storm-center broke. A couple of scattered cases were first reported to the New York Board of Health in August, 1900. Both were removed to North Brothers Island and both promptly died. Along toward the end of October several more cases were reported to the board of health and a grave epidemic had begun.

"These primary cases are supposed to have come from abroad, probably from Naples, where small-pox was still epidemic when the writer visited that city in July. Many more emigrants arrived from Italy, who also helped spread the infection, and as a result the disease obtained a good foothold in the city. The type of disease compared with that which had prevailed in the West was much more serious and graver in every way. The initial symptoms, the complications, particularly the eye and nervous symptoms, together with the resultant abscess, more nearly approached the classic symptoms of the disease, especially its wide-heralded fatality, there being a mortality of about thirteen per cent. in New York as compared with an insignificant ratio in the West. On account of this extremely low mortality I had some difficulty in convincing many of the New York Board of Health diagnosticians that we had real small-pox in the West, although I was perfectly familiar with epidemics in Indiana. A similar condition still holds good in many of the Western States, and I have found it especially true among some few of the Indiana physicians.

"Among the many diagnostic features of the lesion of small-pox is the locality of the eruption. It begins almost invariably on the face and forehead. A few papules, hard and unyielding, present themselves. It quickly spreads within twenty-four hours to all regions of the body. The palms and soles are often affected, although this has not been the common condition in this locality. Likewise the delirium is never so profound. The eye symptoms are extremely rare in the western form, only a few cases being reported in Indiana, while at North Brothers Island conjunctivitis was one of the most common afflictions; corneal ulcer was very frequent, at least three per cent.; and total blindness occurred in quite a number of cases. Despite the zealous care with which these conditions were sought for and combated when discovered, but little was effected by treatment when the patient was gravely sick. The vesicle which appears on the eye differs in nowise from any other small-pox vesicle, and undergoes the same kind of pathological change—the papule turns into the vesicle, the vesicle to the pustule, and the pustule very often into an anterior ophthalmitis, with all its accompanying dangers and often a loss of vision. Most of these eye cases showed albumin in the urine, a fact that is rarely emphasized in text-books

and often overlooked except where rigid and systematic examinations of the urine are made.

"Delirium was also a marked feature of the New York cases. At one time I had five of the patients in one ward in straps as a result of this complication. More prevalent in males, it occurs also in females. This delirium is of a most pronounced type, and of the most active form; the patients are unrestrainable, and more uncontrollable than in typhoid, scarlet fever or erysipelas. I have seen as many as five men necessary to subdue one patient. It is far more common in those addicted to the use of alcohol, although the amount of alcohol that the person had been accustomed to take does not make much difference. It occurs as a result of the ingestion of only a very small amount of whisky, and is of the most violent form. Persistent mania may occur, but is very rare. I know of but one case from actual experience.

"So acute and so extreme may this delirium become that I may cite the instance of a young girl, aged fifteen, whom one and one-eighth grains of morphine in conjunction with one-fiftieth of hyoscin, given at intervals within twelve hours, utterly failed to quiet, and who seemed as restless in the morning as she had been the night before.

"Boils and abscesses were the most important sequelæ, and while they may delay the convalescence of the patient to a certain degree, they have never been very dangerous, although sometimes quite disfiguring, especially when occurring on the face and neck. Curiously enough, in all severe cases there seems to be a tendency for them to be absolutely bilateral in their distribution. Whether this shows a peculiarly sensitive condition of the lymphatic system, and especially of the lymphatic glands, in small-pox, cannot be stated; and naturally, until we have better insight into these phenomena, the reasons therefor must be entirely problematical and speculative.

"And so we find that small-pox is not in all parts of the United States a mild disease, and one which may be held in contempt by the laity or passed off as a mere idle nothing. Because in the western form we see nothing in its symptoms, complications or sequelæ to annoy or worry us, we should not abate our interest in small-pox or discontinue in any degree what ever methods have been employed to prevent its spread or contagion and stamp out its infection. In the epidemics I have seen with my father in Indiana, I have never seen any serious deformities or results. Blindness has been only noticeable by its absence; severe scarring has been exceptional, and pitting or pocking of the face has been about the only sequel which has been worthy of consideration."

In Indianapolis there have been but three instances of death as a result of the disease in the last three years, although we have had over five hundred cases, costing for their care and the control of the infection some \$25,000. In Indiana we have had between four and five thousand cases with only twenty deaths reported, and several of these resulted from complications.

Dr. Charles Ferguson, of Indianapolis, for the last two years diagnostician to the Indianapolis Health Board, has kindly furnished me the following notes on the diagnosis from chicken-pox:

In the present epidemic chicken-pox has been the stumbling-block of the physician. Small-pox has been mistaken for varicella more often than any other eruptive disease.

The difficulty of diagnosis has not been made easier by the study of the

older text-books and some of the later literature on the subject. Typical cases of variola stand in marked contrast to typical cases of varicella, and present no difficulties. So various and typical are the manifestations of the eruptions of small-pox in the prevailing epidemic, that the expert diagnostician may easily find such gradations in the manifestations of its lesions as to lead almost imperceptibly into varicella-like lesions.

Variola-modificata, or varioloid, as it is erroneously termed, may pursue such a typical course as to make its resemblance to varicella in some of its modifications extremely striking. Again, authorities are almost unanimous in declaring that chicken-pox is a disease of childhood, and that with the advent of puberty immunity is conferred.

A study of the history of small-pox shows that it is as much a disease of childhood as varicella. Thanks to vaccination, quarantine and disinfection, the disease, unlike its congener, is no longer endemic. In pre-vaccination times seventy-five per cent. of the deaths from small-pox were among infants.

Varicella is a disease of childhood because of its endemic nature, our ignorance or lack of interest in its prevention, and because of the immunity conferred by one attack. An individual who has reached puberty without an attack of chicken-pox has escaped because of the lack of susceptibility at the time of a possible exposure, and not because of a natural immunity conferred by puberty. Exceptionally we find persons who have never been exposed to the contagion of varicella in childhood or upon whom one attack has possibly not conferred immunity.

The writer has, in the last two years, seen four cases of varicella in patients who have passed the age of puberty. One case, a boy of seventeen years, one a man of thirty-two, a girl of eighteen, and a negro; male, aged twenty-seven. In one case the father of two children was found well covered with the eruption of varicella, contracted from his child, who was then in the decrustating stage of the disease; while another child, an infant, was well marked with the polymorphous lesions of chicken-pox in its first stages. Another case, a negro, was sent to the isolation hospital suffering from what was believed to be a doubtful case of variola. He was well covered, hands, face, arms, legs, trunk, palms and soles, with large, well-filled pustules, that almost completely collapsed upon puncture. Fifteen days after his admission to the hospital he was suddenly attacked with the well-marked prodromes of variola, followed by a typical eruption that pursued the usual course.

Most confusing are the cases of small-pox where the eruption does not all appear at once. By this is not meant the successive appearance upon the face, trunk and legs that we find in typical attacks, but an apparently new crop of papules that appear on any part of the body along with the earlier, and by this time vesiculated, papules. Thus papules, vesicle and crust are presented at the same time. To see one of these cases at this time, particularly when the lesions are, many of them, abortive, is most confusing to even an expert. Keeping in mind these aberrant types of variola, the careful physician would make no mistake. Taking the typical case as his guide and the history of the invasion, a little time spent in observing some papules and vesicles in their development will make the diagnosis. A careful study of the lesions will show that, while many are superficial, others are present that are deep-seated, involving the deeper layers of the skin.

Variola is distinguished from varicella by the prodromal symptoms—nausea, chill, headache, backache and fever—which on the third or fourth day disappear as rapidly as they developed. This subsidence of the acute onset is coincident with the appearance of the initial lesions or papule upon the exposed parts of the body. In chicken-pox there is rarely any notable constitutional disturbance before the appearance of the lesions upon the protected portions of the body. Mothers are frequently not aware of the illness of the child until they discover the eruptions upon the body in dressing or undressing it. In two of the adult patients of the writer the patients stated that they did not know of the eruption until it was revealed in undressing.

In varicella the temperature is, as a rule, not elevated before the appearance of the vesicles, and is maintained for several days during their appearance and development. In variola the patient expresses himself as feeling well or better, as the subjective symptoms disappear with the appearance of the papules. In chicken-pox he complains of nausea, headache, etc., with the appearance of the eruption.

The early appearance of papules upon the fingers or upon the ears is of great value in variola. Histologic differences in the lesions are important. The deep-seated, indurated papules of variola are peculiar to the disease, and are markedly different from the superficial thin marked vesicle of varicella. The vesicle of small-pox begins in the apex of the papule, and, when fully developed, is multilocular, being divided by various septa into microscopical pockets. When punctured, therefore, the vesicles do not collapse.

In varicella the vesicle develops in a few hours, and is soft and velvety to the touch, collapsing more or less completely in most instances upon puncture, is easily broken by abrasion, exposing excoriated areas.

The uniformity of the development of variola is an important difference. The successive crops of macules, vesicles, pustules, together with excoriated areas and crusts observed in the same parts of the body at the same time, together with the predominance of the lesions on the trunk, make up a clinical appearance greatly differing from that seen in variola.

Umbilication is sometimes apparently lacking in abortive types of small-pox, while in chicken-pox there is often an apparent umbilication, due to the formation of a central crust or necrosis, that closely simulates the depression in variolous pustules.

Previous attacks of chicken-pox, as revealed by the characteristic "pits" to be found in the face or trunk, or recent vaccination as shown by a good scar, are aids to diagnosis.

In all cases of doubt, wait, as the time element is sometimes the only thing that will clear up the diagnosis.

Regarding the occurrence of small-pox in vaccinated people; the following is the observation of all epidemics since vaccination was first employed:

Osler states (1895, page 68) vaccination is not claimed to be an invariable and permanent preventive of small-pox, but in the great majority of the cases it renders the person for many years insusceptible.

Jenner believed that vaccination conferred life-long immunity, and many people of our day and some physicians also have this false view.

In this connection we have the remarkable observations of Moore on the Dublin epidemic.

The Dublin epidemic was studied by Dr. Moore. There were 2815 cases from April 1, 1876, to March 31, 1881, a period of five years.

Discrete cases, 1625. Of these, 1539 were vaccinated, 86 not. There were 14 deaths only—less than 1 per cent., and of these, 7 died of sequelæ.

Confluent cases, 857. Of these, 552 were vaccinated and 305 not. There were 344 deaths, equal to 40 per cent. Of the vaccinated, 23 per cent. died; of the unvaccinated, 71 per cent. died.

Malignant cases, 333. Of these, 212 were vaccinated and 121 were not. Deaths, 255, or 76 per cent.; vaccinated, 69 per cent.; unvaccinated, 88½ per cent.

Of the 2815 patients, 2303 were vaccinated and 512 were not. There were 611 deaths, 22 per cent. of the whole. Of the deaths, 286 were vaccinated and 325 were not.

The great majority of these cases—over 90 per cent.—had only the childhood vaccination. They had been vaccinated but once, and were poorly protected.

Discussing these statistics, Dr. Moore says that they must be startling to those who believe vaccination is a certain preventive against small-pox. But they surely teach that vaccination, like a previous attack of small-pox, is only a temporary, and therefore an imperfect, preventive against small-pox. Secondly, they teach that the vaccination should be repeated at least once in a lifetime to keep up its protective efficacy. Thirdly, there can be no doubt as to the lessening of the severity and fatality of small-pox, due to even one vaccination.

In pre-vaccination times, little more than a century ago, the yearly mortality in England and Wales was 3000 deaths to the million people, which with the present population would be 87,000 deaths a year. But in 1890 there were but 15 deaths in England from small-pox. From 1881 to 1890 the average was 1227 deaths a year in England—that is, one-seventeenth of the death-rate of pre-vaccination times. We have repeated these figures, which occur in another part of this paper, purposely, as they should be in the grasp and mind of every believer in medicine and friend of vaccination.

As to the reasons of the mildness of the present epidemic, opinion varies; but all are thankful that most of the cases are of this mild type. Confluent and hemorrhagic forms do occur, however, and with the old-time fatality.

There may be a social hereditary immunity acquired, as in other diseases. This may be the result of generations of vaccination, and perhaps due to the natural law of survival of the fittest. But to deny the nature of variola because nearly all the cases are mild is to thresh old straw, to lead the people to confusion, and to invite commercial disaster and death if a severe form of the disease should become prevalent in the country.

CLINICAL REPORTS.

DOUBLE OPTIC NEURITIS OCCURRING DURING LACTATION.

By JOHN GREEN, JR., M. D., of St. Louis.

Mrs. J. P. M., housewife, aged twenty-six years, came under observation August 15, 1901. Family history negative, with reference both to constitutional and ocular disease. As a child the patient was considered "delicate," and during school life had frequent attacks of migraine accompanied by "bright flashes of light" (scotoma scintillans?). Apart from a tendency to constipation, her general health has been excellent. Menstruation began at fourteen and has always been regular. She married at the age of twenty-four, and has a vigorous, splendidly nourished baby, five months old. Parturition was easy, the child being born before the arrival of the accoucheur. The puerperium, however, was prolonged to three weeks, owing to "paralysis of the bowels," which necessitated the employment of cathartics and enemata. There have been no miscarriages.

The patient has had a plentiful supply of breast-milk, and has suckled the infant uninterruptedly. Menstruation was re-established in June, 1901. Since the end of the puerperium the patient has considered herself entirely well, and has been able to perform the rather arduous household duties which fall to the lot of a farmer's wife. Syphilitic and gonorrheal infection are strenuously denied.

Ocular History.—Prior to the present attack the eyes were considered "perfectly strong." August 5, 1901, the patient noticed that the eyes "pained on looking strongly to the right or left or up or down," and "felt a little sore to the touch." The situation continued unchanged up to August 8th, when the sight of right eye was accidentally discovered to be "very dim." Four days later (August 12th) the patient awoke to find that "the sight of left eye had gone out during the night—could no longer find her way around the room." August 13th, the husband noticed that the right eye seemed to be more prominent than the left, and both "stared vacantly" into space.

Ocular Examination (August 15, 1901).—The eyes are widely opened, and wander vaguely in different directions. The right eye is slightly more prominent than the left. Great difficulty is experienced in locating the examiner's finger, held 40 cm. in front of the eyes. Both pupils are dilated, the right rather more than the left. Direct light stimulation evokes a sluggish and rather faint response of the right, but an immediate and active response of the left pupil. There is complaint of pain on attempted turning of the globes in any direction, and in consequence the movements of the eyes are somewhat restricted.

R. Eye—V., acute perception of light.

L. Eye—V., $\frac{1}{60}$ + (a little excentric).

Ophthalmoscopic Examination.—R. Eye.—Media clear. Optic papilla hyperemic and swollen, the vertex projecting into the vitreous 3 D.=1 mm. above the general fundus level. The margins of the disk are blurred, the retina immediately surrounding the disk exhibiting a slight haze. Veins dilated and tortuous. Macular region clearly visible and shows no lesion.

L. Eye.—The same conditions obtain as in the right eye, except that the swollen nerve-head is only 2 D.= $\frac{2}{3}$ mm. above the retinal level.

By candle projection-test there appears to be no peripheral contraction of either field.

Pulse, 80; respiration, 20; temperature, 98.4° F.

Urinalysis.—Sp. gr., 1018, clear, acid, no albumin or sugar.

(Urinalyses were made on every alternate day up to September 15th, and on no occasion was any abnormal constituent discovered.)

The patient was sent to St. Luke's Hospital and placed in a moderately darkened room. She was given immediately a calomel purge (gr. v.) followed in eight hours by effervescent citrate of magnesia (℥ viij). The exhibition of calomel (gr. $\frac{1}{10}$ every hour) was continued for five days until a moderate ptialism ensued. The mercurial treatment was then continued with corrosive sublimate (gr. $\frac{1}{10}$ four times a day). Apart from interdiction of fresh fruits there were no dietary restrictions. She was permitted to continue suckling the infant.

The case was seen in consultation by Dr. Given Campbell, who was unable to detect, after exhaustive examination, any sign indicative of central nervous disease. There was, also, no evidence of cardiac or respiratory lesion.

The ocular conditions, both subjective and objective, remained *in statu quo* for about a week. There was no pain in or about the eyes. Occipital headache of moderate severity and lasting several hours occurred twice. There was no vertigo, nausea, or vomiting. Vision perhaps slightly improved in right eye, but fell off to "perception of light" in left eye. The sole encouraging feature of the case at this time was the evidence of intact peripheral retinal function, as shown by the recognition of the direction of a lighted candle in all parts of the field.

August 22d the patient was greatly delighted to find that she could discern objects, such as a tumbler, a towel, an orange, the baby's hand, etc., when held to her extreme right, the gaze meanwhile being directed straight forward. Recognition was wholly by appreciation of the object's general contour, as whatever vision she possessed was strictly peripheral, and the color sense was totally in abeyance. From this time the improvement in vision was reasonably rapid, especially in right eye, and by August 28th some degree of central vision had become re-established. The left eye was persistently laggard in this respect, and, as subsequent perimetric measurement showed, there was probably some organic lesion of the papillo-macular bundle in the optic nerve.

Concomitant with the visual improvement, ophthalmoscopic examination showed a subsidence of the swelling of the papilla, a reduction of its hyperemia, and a restoration of its normal marginal outline. Perception of color returned slowly, and by September 30th was practically normal, with the exception of some confusion in the differentiation of reds and browns.

The patient left the hospital about September 5th, with vision restored sufficiently to enable her to find her way about without difficulty. During the three weeks' hospital residence the highest temperature reached was 99.6° F.; the pulse ranging between 70 and 86, and respiration between 18 and 24. The sublimate was continued (gr. $\frac{1}{10}$ *ter diē*). On September 10th examination showed the ocular condition as follows: Pupils equal, 4.5 mm. diameter, reacting actively to light and accommodation: R. Eye—V., $\frac{15}{192} +$ without correction. L. Eye—V., $\frac{3}{38}$ (excentric).

September 12th—R. Eye—V., $\frac{15}{150}$. L. Eye—V., $\frac{10}{150}$ (excentric).

September 15th—R. Eye—V., $\frac{15}{96}$. L. Eye—V., $\frac{15}{192}$ (excentric).

September 19th—R. Eye—V., $\frac{15}{48}$. L. Eye—V., $\frac{15}{120}$ (excentric).

At this time the ophthalmoscope showed a complete subsidence of inflammatory activity in the optic disks, which, however, were beginning to show a positive pallor, especially in the temporal halves. Perimetric measurements of the field for white showed no peripheral contraction in either eye, but revealed the presence of a small, partial, central scotoma in left eye. (See charts.)

In view of the evidences of beginning atrophy, strychnine sulphate (gr. $\frac{1}{13}$ in twenty-four hours) was prescribed in conjunction with the sublimate; later the strychnine was increased to gr. $\frac{1}{7}$ in twenty-four hours.

October 4th—Measurement of the cornea by the Javal-Schiötz ophthalmometer showed a vertical astigmatism in either eye in the neighborhood of 1D, and careful trial showed the refraction to be: R. Eye—Ah. .5 D; Mo. Vertical, V., $\frac{1.5}{19}$. L. Eye—Ah. .5 D (?); Mo. Vertical, V., $\frac{1.5}{60}$ (excentric).

The patient was allowed to return to her home October 5th, with instructions to continue the sublimate (gr. $\frac{1}{10}$ ter die), and strychnine sulphate (gr. $\frac{1}{7}$ in twenty-four hours). During October and November she was seen at intervals of one to two weeks, visual tests showing slow but positive gain in either eye.



Right Field.



Left Field.

December 22d—R. Eye—V., $\frac{1.5}{15}$ without correction. L. Eye—V., $\frac{1.5}{48}$ without correction. With the ophthalmoscope both disks appeared pale, the left rather paler than the right. Arteries were somewhat attenuated; fundus otherwise normal. Sublimate reduced to gr. $\frac{1}{16}$ ter die; strychnine continued as before.

February 16, 1902 (latest observation)—R. Eye—Ah. .5 D; Mo. Vertical, V., $\frac{1.5}{15}$. L. Eye—Ah. .5 D; Mo. Vertical, V., $\frac{1.5}{48}$ to $\frac{1.5}{38}$. Perimetric measurements showed practically the same conditions as obtained September 15, 1901. In other words, during a period of five months there had occurred *no peripheral delimitation of the visual fields*; a fact which is, of course, of favorable prognostic import. To all appearances, also, the central portion of the retina of the left eye was beginning to regain its function. Both disks showed improved color. The sublimate was discontinued, strychnine being continued (gr. $\frac{1}{7}$ ter die).

Sandmann¹ mentions optic neuritis as sometimes occurring during lactation, the condition, according to Uhthoff's researches, being due to toxins. The case now reported would seem to belong to this category.

¹ Changes and Diseases of the Eye During Pregnancy, the Puerperium and Lactation (*Muench. Med. Wochenschrift*, January 25, 1901).

ABDOMINAL TUMORS.

BY JESSE S. MYER, M. D., of St. Louis, Missouri.

(CONCLUDED FROM FEBRUARY ISSUE.)

ABSCESS OF THE LIVER, POINTING POSTERIORLY.

G. M., age forty-two; farmer; had typhoid fever in September, 1901. At the end of the first week of his illness he experienced a sharp shooting pain in the right axillary line, at the level of the eighth intercostal space. Though the acute pain never re-occurred, he had throughout his illness a "sore spot" at this point, where pain could always be elicited upon pressure. He was not able, in fact, to lie on this side. He was in bed for five weeks, recovering from the typhoid fever without any further complications. He experienced some "pain in the back" from time to time during his convalescence. This, together with lack of physical strength, which seemed reluctant to return, prevented his resuming work. About January 1, 1902, two months after his recovery from the fever, he felt slight pains in the region of the former attack, and almost simultaneously was cognizant of a "swelling on the back." This gradually increased in size, and with it the pain. He felt as if there were "something there which should come out;" in fact, as if "something were coming to a head." He had had no chills, and thinks he had no fever; bowels were constipated. He had no difficulty in breathing, nor other symptoms referable to the lungs. During the last three weeks he had lost weight and strength rapidly. Had never been icteric.

Physical Examination.—Anteriorly the liver dullness extends from the lower border of the fifth rib to a point three fingers' breadth below the free margin of the ribs; posteriorly the diaphragm was pushed up to the ninth intercostal space. There was no splenic enlargement or involvement of other abdominal organs. Pressure over the liver at any point produced pain.

Just posterior to the right axillary line between parallel lines drawn from the ninth and twelfth dorsal vertebra was a tumefaction, oval in shape, four and one-half by three inches in diameter, elevated above the neighboring surface to the extent of one inch. The ribs were pressed outward and lay over the mass; fluctuation could not be elicited; there was slight pitting on pressure. The patient's temperature ranged from $99\frac{1}{2}^{\circ}$ to 101° .

The urine contained no peptones or other abnormal constituents. The feces showed nothing abnormal, either microscopically or macroscopically.

A leucocyte count numbered but 8000.

A diagnosis of abscess of the liver was made. The introduction of a needle revealed the presence of a reddish-brown, creamy pus.

An incision and the resection of two inches of the ninth and tenth ribs liberated over a quart of pus. One rib was found slightly necrosed.

The chief point of interest presented by this case was the position of the tumor produced by this abscess. In seeking the surface abscesses are naturally expected to take the line of least resistance; in this case, instead of "pointing" along the lower border of the liver, or the diaphragm, it sought an outlet at the one point where there was greatest resistance.

CORRESPONDENCE.

BERLIN LETTER.

EDITOR INTERSTATE MEDICAL JOURNAL:

"German medicine" has every reason to be gratified with its laurels and the recognition accorded it during the first year of the twentieth century. That grand old master, the hero of modern medical science, Rudolf Virchow, was the central figure of a jubilee such as has rarely been tendered a prince. He who has been spared to give us guidance and inspiration was granted the privilege of witnessing the greatest concourse of medical talent in the world, brought together in his honor, who revered him as the leader of them all. Those favored in attending this festival returned home awed and filled with admiration for this octogenarian, whose labor has brought forth so many blessings to humanity. From the morn of one day until the dawn of the next he received with grace all of the uninterrupted greetings tendered him. And if one saw him at half-past one in the morning, listening with the same obliging smile to the words of the last orator, it was easy to believe his statement that these festivities were a delight, and that he was already thinking with pleasure of the new celebration awaiting him at Cairo, Egypt. He is an unvarying optimist, and it is his nature to anticipate coming pleasures. When we were together at the Congress of German Naturalists and Physicians in Hamburg in September last, he sat looking out on the islands of the Elbe, beautiful in the light of the setting sun, and this picture awakened memories of the happy days he spent on the Nile, and his mind was flying ahead in delightful anticipation of the hours he will spend again in Cairo, at the International Congress of Physicians, where he will be the central figure and whither he will go by special invitation from the Khedive.

But impartial fate denies many hopes! He now lies confined to his bed, suffering with a fractured leg. Egypt for him is more distant than ever before. May he soon recover, and may he be spared to us for many years!

The beginning year of the new century brought another recognition of German medical science. I refer to the awarding of the Nobel prize to Behring, the inventor of the antitoxic serum of diphtheria and of serum therapy in general.

In April of this year Ernst von Leyden is to celebrate his seventieth anniversary. The committee having in charge the arrangements for this occasion are preparing two events: The first, the unveiling of a marble bust of the great clinician in the new amphitheater of the First Clinic for internal medicine in the Charite Hospital in Berlin; the second, the collection of a large fund in von Leyden's name, the same to be at his disposal for the purpose of aiding investigations in some field of medicine.

Our great surgeon, Ernst von Bergmann, has just been honored by appointment to the position of privy councillor to the Emperor, with the title Excellency—a distinction by far the highest that is ever vouchsafed a medical man.

From every point of view we should be gratified with our advancement. *Dat Galenus opes et honores*, to-day, as in former times. There is another honor awaiting Ernst von Leyden: the government will establish in connection with the First Medical Clinic an institute for the investigation of cancer, consisting of two

wards with ten beds in each, and a laboratory for microscopical, chemical and experimental research. The Reichstag has appropriated 53,000 marks for this purpose. It is not known why this institution, which must necessarily shelter surgical cases, has been attached to a medical clinic. It might be explained because of the fact that von Leyden once found in the ascitic fluid from a case of liver carcinoma an organism resembling an ameba, which could not properly be classified by the best authorities. It, therefore, received its name from the two investigators to whom it revealed its existence, and so has been called the *Leydenia gemmipara Schaudinn*. I once had the pleasure of looking upon this conjecturally guilty and minute organism with the respectful awe which was its due, but it has never since been seen.

Schweninger is promulgating the theory that the primary condition in carcinoma is a general infection of the body, and the visible and palpable tumors are merely secondary effects. They represent a kind of dumping ground for the infectious principles of the disease, relieving the general system of this poisonous matter. It is, therefore, Schweninger's idea that it is wrong to remove such tumors, because they really represent a healing process. Perhaps they will test this theory in the wards of the new institute, instead of using the knife. They may possibly fill the institute with those beyond help by the knife. Well, *qui vivra verra!* I will certainly report whatever progress is made in this institute.

It seems that the cancer bacilli or protozoa are more energetically looked for than ever before. The installation of a government institute for the investigation of protozoa looks as if we are going back to the parasitic conception of this disease, in spite of the opposition of Virchow and his followers. At the last Congress of German Surgeons one of the cancer parasite detectors, Dr. Nils Sjoeboring, of Lund, Sweden, was rather roughly handled by Virchow's assistants, O. Israel and Juergens, who said: "To hunt for protozoa is a search without an objective point in infinite space."

But this condition cannot persist very long. We will soon see cured cases of *incurable* cancer, now that the blessing of Christian Science, has reached Berlin. For this new creed, thanks to you, America! These people have erected their tabernacle in the fashionable West End of Berlin, and, sad to relate, the pilgrims worshiping at the shrine are not of the lowest and most ignorant classes of society. The situation is certainly a serious one, even in its absurdity. It is strange that there is nothing so stupid that it cannot gain followers. "No knife, no medicine," is the bait which will always give a good catch. A reaction, however, has set in. One of our brave clergymen has already thundered against the mischievous creed of Christian Science, which has nothing in common with Christianity or real religion.

Finally, I wish to report to you two lectures which created quite a sensation. W. A. Freund, the well-known gynecologist of Strassburg, read a paper before the Berlin Medical Society on "Anomalies of the Thorax in Phthisis and Emphysema." He reported that he had observed that in all cases of tuberculosis of the pulmonary apices there was always an ossification of the first costal cartilages, with ankylosis of the sterno-costal articulation. He sees in this rigidity the main cause for the more frequent involvement of the pulmonary apices in the tuberculous process, the primary cause being an excessive anemia of the parts. He came to the conclusion, therefore, that in all such cases where this ossification has taken place, it is justifiable to resect the rib in order to restore

the expansibility of the lung. The discussion which this report evoked was not fully in accord with the essayist's views.

In the Society for Internal Medicine, Prof. Senator read a paper on "Colics, Inflammations and Hemorrhages of the Kidneys," referring to the eminent work of I. Israel, "Surgical Treatment of Diseases of the Kidneys." He approached the question as to what extent colics, hemorrhages and chronic nephritis may be cured by incisions made into kidneys. Israel made incisions into kidneys in a series of cases for diagnostic purposes, expecting to find a stone, a tuberculous focus or a tumor. In some of his cases he could not detect any cause for the hemorrhage or pain. The cases recovered, however, the hemorrhages and pains disappearing. He reconciled these results and the true nature of the trouble in this way: He claims that the pain is due to a congestion of the kidney, which is relieved by incision. The congestion of the kidney is explained on the basis of an exacerbation of a chronic nephritis, which condition cannot be excluded, even in the absence of casts or albumin from the urine. By means of this incision he cured several cases of chronic nephritis where the existence of this disease was proven by microscopical examination of the urine. Senator claimed in his paper that in chronic nephritis both kidneys are affected, and hence the cure cannot be ascribed to the incision which is made into but one kidney. Klemperer, in discussing the paper, called attention to the existence of angio-neurotic hemorrhage, citing menstrual hemorrhage and hysterical hemoptysis and hemoptoe as noteworthy examples. Casper, on the other hand, explained some of these cases by spasm of the ureter. The majority of the internal medical men were against the operative procedure, and advised surgical interference only in cases showing severe and unfavorable symptoms.

Berlin, February, 1902.

DR. HEINZ WOHLGEMUTH.

EDITORS INTERSTATE MEDICAL JOURNAL:

Concerning the article "Penetrating Wounds of the Heart, with Suturing of the Wound," etc., by Dr. H. L. Nietert, published in the December issue of your journal, I will say that the doctor has made some little mistakes in regard to the literature on such cases.

Capellen was not the first, as the doctor states, to attempt the operation, in 1896. Dr. Daniel H. Williams, surgeon to the Cook County and Provident Hospitals, Chicago, Illinois, was the first known operator to attempt the operation.

James Cornish, an expressman, twenty-four years of age, was brought into the Provident Hospital, July 9, 1893, with a stab wound about one and three-fourths inches in length, the knife penetrating the fifth costal cartilage to the left of the sternum, the pericardium and the apex of the heart.

In the operation which followed the next morning, July 10, 1893, both wounds were sutured.

The patient recovered and was well and at work three years after, when seen by the operator.

The indexed Catalog and Medicus of the National Medical Library, surgeon-general's office, Washington, D. C., at that time did not give a single case of suture of the human heart.

Dr. Williams deemed his the first case, and published it as such in the *Medical Record* of March 27, 1897. — J. WILLIAM McDOWELL, M. D.
 St. Louis, February 15, 1902.

EDITORS INTERSTATE MEDICAL JOURNAL:

In reference to the letter of J. W. McDowell to which you have asked me to make reply, I beg to say that I have made no mistake when I omit the case operated upon by the Chicago surgeon. If the doctor will familiarize himself with the article in the *Medical Record*, to which he refers, he will find that the case cannot be included in my list, which treats only of wounds penetrating into the cavity of the heart.

The title of Dr. Williams' paper is "Stab Wound of the Heart and Pericardium—Suturing of the Pericardium." It states that a wound one-tenth of an inch in length was found in the heart, which did not bleed. And there is nothing in the article that indicates that the wound penetrated into the cavity of the heart, nor was it sutured. The parietal layer of the pericardium, however, was sutured.

The case cannot be included in the list of penetrating wounds, because it belongs in a class by itself. The non-penetrating wounds are so different as to treatment and prognosis, that they cannot very well be classed with wounds penetrating into the cavity. Non-penetrating wounds, unless the coronary artery has been injured, usually require little if any surgical interference, and almost always get well. Whereas wounds extending into a cavity require urgent surgical treatment or they most invariably prove fatal.

The doctor is therefore mistaken when he considers Dr. Williams' case in the same class with the twenty-seven cases of "penetrating wounds of the heart, with suturing of the wound," that I have recently collected.

Suturing of the pericardium, which was the extent of the operation in Dr. Williams' case, is not so rare. The records of this hospital alone show six such cases, with five recoveries. The first dates back to September 6, 1891, and was operated upon by Dr. Dalton, then superintendent of the City Hospital. A report of this case will be found in the February number of *The Annals of Surgery* in 1895. This case, as you see, was operated upon two years before the Williams' case appeared. The second case was one operated upon about eight years ago by Dr. Marks, and reported about that time in the *Fortnightly Journal*. The other four came under my observation.

Yours very truly,

H. L. NIETERT, M. D.

St. Louis, March 1, 1902.

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EDITED BY

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FRANZ NEUGEBAUER, M. D.,

Professor; Director of the Evangelical Hospital, Warsaw, Russia.

JULIUS NEUMANN, M. D.,

Docent of Obstetrics and Gynecology, University of Vienna, Austria

JULIUS SCHNITZLER, M. D.,

Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,

Berlin, Germany.

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EDITORIAL COMMENT.

NEUROLOGICAL NOMENCLATURE.

The tendency to differentiate too minutely the various clinical manifestations of any disease or group of diseases into separate types is not to be encouraged, unless a clearer conception of morbid conditions can thereby be obtained. The necessity, it might almost be said, the instinct, to classify is a very fundamental thing in questions of human knowledge. The complexity and uncertainty of a classification may often be taken as the measure of the lack of absolute knowledge which we possess on that subject. Yet the first step towards a more definite conception of a mass of known facts is to be found in an analytic view of them, and a system of classification is nothing more or less than the expression of such an attempt. It is probable that all classifications, whether in medical knowledge or in that of other branches, must finally undergo a process of simplification, and it generally remains for some great synthetically talented mind to perform such a service. The confusion which prevails at present in that great group of diseases of the nervous system commonly known as "neuroses" is due in the main to badly selected terms used in description. The exact nature of each one of these terms has not been adequately defined. To many the terms "neurasthenia" and "hysteria," are interchangeable. Their distinction is based primarily upon the sex of the individual under consideration. Hysteria is female, neurasthenia, male. To others, again, groups of symptoms under these heads are called "functional," thus giving to this term the importance of a definite, clinical

disease. This type obtains its right of existence in the supposed absence of anatomical lesions underlying it. To others, again, a great part of the neuroses appear mainly as simulations, or, as it is more charitably described, as products of the imagination. It is often puzzling to know just exactly what is meant when the one physician calls a paralysis functional and another the same thing hysterical, or when a third refers to a group of painful symptoms as psychical, and another calls the same group neurasthenic. There is obviously either a total misunderstanding of the symptoms themselves, or there is a needless multiplication of terms. Upon closer examination it is found that the fault is mainly one of miscomprehension. Neurasthenia and hysteria are two well-defined clinical types, in many respects the direct antithesis of one another. They may occur together, it is true, but only in the sense of a complication, as in other diseases. If it is remembered that there is a grave doubt concerning the existence of a mono-symptomatic type of hysteria, an isolated symptom will not be so hurriedly diagnosed as hysterical, when by that we imply the existence of hysteria as a general condition. The use of the word functional is unfortunate, because almost any affection of any organ must result in disturbances of the function of that organ, for it is only by its functional abnormality that its morbid condition can be recognized. If the term functional is retained at all, it is evident that it must be given a more restricted meaning, for it is obvious that its application to hysteria or neurasthenia is only generic, and can serve no other purpose. If it is used at all, it should be restricted to those conditions which result in a disturbance of the function of an organ, where that organ, or part affected, is not involved anatomically or physiologically in the process at hand. For example, if there is a painful dislocation of a joint, the muscles of that joint or of the extremity in the neighborhood of the joint are functionally paralyzed, because, if they were put into use, pain and discomfort would naturally follow. In other words, functional paralysis in this sense would mean simply a conscious inhibition of motion which afterwards may become unconscious. Of simulated symptoms there is not much to be said, except that a motive must be discovered, either upon material or other grounds, before such diagnosis can be made. The various vague disturbances met with which cannot be classed with any of these before mentioned are to be regarded as evidences of the presence of a general neuropathic tendency or nervous instability. The term "Nervosität," of the Germans, of which no adequate translation but that of "nervousness" exists, may be the general term given to this scattered group of symptoms. According to this provisional scheme the neuroses may be divided into the following groups: Hysteria, neurasthenia, functional symptoms, and simulated symptoms. The term "nervousness" may be used merely as indicating a tendency towards the possible development of the two main groups, neurasthenia and hysteria.

THE RADICAL MASTOID OPERATION.

The simple opening of the mastoid dates back as far as the seventeenth century, but the importance of the surgical treatment of chronic middle ear suppurations was not known until 1873, when Schwartze and v. Troeltsch published their anatomical and pathological findings. Schwartze opened the mastoid antrum through the mastoid process, thus establishing a counter opening through which the middle ear could be irrigated and stagnating secretions removed. In a great many cases the results were not satisfactory. In 1889 Küster, in addi-

tion to the opening of the mastoid antrum, removed the posterior wall of the external auditory canal, and soon after v. Bergmann advocated also the removal of the outer wall of the attic, making one cavity out of the middle ear, mastoid antrum and mastoid cells, which can be easily explored and all diseased bone and tissue removed. Since then various methods of operating have been advocated, but all have the same end in view.

The indications for so radical a procedure cannot be sharply defined, hence it is one point at which many authors are at variance. Some advocate the operation in all cases of long standing, on the ground that the mastoid process and antrum are often seriously diseased when there are no other clinical evidences, aside from the discharge, and that not only is the life of the patient in constant danger, but also the good results of the operation are greatly lessened by waiting for more pronounced symptoms. While others advise the operation only when carious bone is known to be present, and then only when other methods of treatment fail, on the ground that cases of suppurative middle ear trouble have been known to exist from childhood to old age. While conservatism should be the rule in those cases, we are inclined to think that the latter has been carried to the extreme, and the lives of patients needlessly sacrificed. The post-mortem reports from Guy's Hospital show that out of 9,000 cases, in 57, or 1 in every 158, death was due to ear disease; and Gruber found, under 40,000 post-mortem reports, that death in 232, or 1 in every 172, was due to the same cause. Alarming as these figures may seem, Gruber thinks they do not show the actual state of affairs, as many cases never come to a post-mortem, and death is accounted for in other ways, when it is really due to a chronic unsuspected middle-ear suppuration.

It is almost a daily occurrence to find patients of this class who have been told that there was no cure for their condition, and even if the discharge would stop, it would soon return. The results of the various clinicians have disproved this. Stocke reports one hundred cases on which he performed the radical operation for chronic suppurative middle-ear disease, with a permanent cure in ninety-four. Three died, but independently of the operation. Two were lost sight of, and one was not cured. The hearing was improved in thirty-one, and in six it was worse after the operation, but in only three to any degree. In forty-nine there was no change, and in fourteen no record was made. Other clinicians report equally good results; and Politzer, in referring to the radical mastoid operation, says that the surgical treatment of chronic suppurative middle-ear disease, in its present state of development, is one of the most valuable achievements of modern otology.

THE FUTURE WATER SUPPLY OF ST. LOUIS.

The commission of hydraulic engineers employed by the city of St. Louis last spring to investigate the available means of securing pure water for this municipality, have lately handed in their report and conclusions. It seems that the proposition of furnishing a better water supply to the citizens of the city than they now receive narrows itself down to one of two things; either the use of water pumped from the Mississippi river and then filtered, or else the installation of a gravity system at the Meramec River, situated some ninety miles from this city. The report of the engineers shows that two members of the commission, Messrs. Wizenor and Williams, favor the use of the Meramec River water, while the third member, Mr. Hazen, favors filtration of the present sup-

ply. The reports are extensive and embody careful observations as to the possibilities in both directions. Chemical and bacteriologic records of the condition of the water from the Meramec River are given, these examinations having been made by a number of experts working independently and at different times. An estimate of the approximate cost of both systems is given, with figures showing exactly how the money can be raised, etc.

The majority report favored the use of the Meramec River water. The minority report favored filtration with alum as a coagulant. The majority report showed, in the first place, that the Meramec River water is pure, as proven by competent bacteriologic and chemical findings. This is indisputable. It means much so far as strengthening the stand taken by the engineers, representing as it does the consensus of opinion of engineers—in the face of two propositions, one implying the use of a filtered polluted water, and the other implying the use of an unpolluted, unfiltered water, it is by far preferable to use the unpolluted water, even though the cost be greater.

The Meramec River drains from a mountainous, unpopulated country, so that there can be no difficulty in policing the water-shed at all future times. The very character of the country precludes any possibility of any wholesale pollution of the water-shed. In the second place, the supply of water is ample and fully adequate for present and future needs of the city. Accurate figures demonstrate this fact conclusively. In the third place, even though at first sight the cost of installation of this plant seems much higher than the cost of erecting a filter plant, it is shown by careful mathematical data that the cost of the plant fifty years hence would be much less than the cost of maintenance of a filter plant. The use of the Meramec River water means simply the erection of dams in the valley adjacent to the river, together with large storage reservoirs near the city. The elevation of the source will furnish the force necessary to drive the water into the city with more energy than is now accomplished by means of our great pumping engines at the Chain of Rocks. Briefly, then, the Meramec River proposition agrees to furnish a pure water, of adequate quantity, by force of gravity, at a comparatively cheaper cost than filtration, with perfect assurance of future purity and adequacy of supply.

The minority report, compiled by Mr. Hazen, who is an acknowledged filter expert, and therefore rather inclined to look with approval on any proposition which implies water filtration, favors filtration of the present source of supply—*i. e.*, the Mississippi river water. He claims that the Meramec River water is more costly than filtration. He attempts to show that the supply of water from the Meramec River might some day prove inadequate. He does not deny the purity of the Meramec River water. Hence, he opposes himself to the consensus of opinion referred to above. He declares that filtration of the Mississippi river water can only be accomplished by utilizing the coagulant alum as a preliminary measure. He admits that there are no experimental or statistical data of any kind that will show that it is a fact that the Mississippi river water as received in the in-take tower of the St. Louis water-works can be successfully filtered on a large scale, even with alum coagulation. In other words, Mr. Hazen reports against the Meramec River proposition, which represents the ideal of modern engineering and scientific thought on a perfect municipal water supply, and endorses a filtration proposition, the practicability and feasibility of which has never been demonstrated! The conclusions, then, of this one

member of the commission have not the same firm basis of fact and reason to support them that we see in the conclusions of the majority members of the commission.

Another point in connection with the filtration plan that must needs be interesting to medical men is the contemplated use of alum as a coagulant in the filtering process recommended by Mr. Hazen. Medical men are familiar with the statutes prohibiting the use of alum in food-stuffs, baking powders, etc. Now, the method of filtration in which alum is employed means that a large percentage of alum will be found at one time or another in the affluent. It is stated by Fuller, who made an elaborate report on experimental filtration of the Ohio river water, that "in practice it may be stated that it would be almost impossible for one uniformly to apply this chemical in such quantities as would accomplish the clarification, and at the same time keep the amount of chemical so small that practically none would remain in the water after subsidence for about eight hours." (Fuller's Report, page 281.) This statement is made with Ohio river water as the material treated. It would then be still more difficult to control the amount of alum used in dealing with the Mississippi river water, which presents much more formidable difficulties to treatment with alum by reason of the relatively large and varying quantities of suspended and dissolved solids present. Hazen recommends "five-minute" interval examinations of the water to control the percentage of alum used: when we take into consideration the many difficulties of carrying out such a fantastical procedure as five-minute examinations of a large water supply, with regulation of the amount of alum applied to the water, etc., the status of things passes from the practical to the most absurdly theoretical. Above all things, let us remember that alum is a harmful agent when ingested. The alum coagulation of water means the constant presence of greater or less amounts of alum in the effluent, with all the dangerous consequences thereto.

As medical men we are interested in procuring a pure water for St. Louis, free from disease-producing bacteria. We realize the awful consequences of a pollution of the water supply with the bacillus typhosus. As medical men we should strongly condemn the contemplated action of using a deleterious agent like alum in our water supply. The proposition offered by the Meramec River owners certainly deserves the endorsement of the medical men in our community, representing as it does perfect water, unpolluted and unadulterated. On the other hand, the use of alum in our water supply should be unmercifully condemned as being unjustifiable, unnecessary and highly dangerous.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

Public Health Reports.—(June 28, 1901—December 27, 1901).—Small-pox in the United States as reported to the surgeon-general, United States Marine Hospital Service, from December 28, 1900, to December 27, 1901; the grand total of cases reported was 48,206, with 1,127 deaths. During the same period, 1900, the grand total of cases reported was 20,362, with 819 deaths.

The Differential Diagnosis of Small-Pox.—MACCOMBIE (*The Lancet*, December 28, 1901).—The diagnosis of small-pox in the pre-eruptive stage is frequently rendered difficult because of its prodromal rashes simulating scarlet fever and measles. The absence of the eruption for the most part on extensor surfaces, the face, neck and temples, faucial inflammation and submaxillary gland enlargement, and the presence of a severe backache, should warn one against a diagnosis of scarlet fever.

The rash resembling measles is only slightly raised and disappears on stretching the skin. It reaches its height within twenty-four hours. Other conditions which may simulate small-pox in the pre-eruptive stage are erythema multiforme, typhus fever, influenza, ptomaine rashes, Rötheln, copaiba rashes, lichen and lumbago.

The diagnosis of small-pox in the papular and vesicular stages will be somewhat influenced by vaccination. In unvaccinated patients the eruption is in its earliest stages macular; while in vaccinated subjects it is macular or papular, and within a few hours becomes distinctly shotty.

The disease most frequently taken for small-pox is chicken-pox. The chief differential points lie in the distribution of the eruption, the shape of the vesicles, their rate of growth and the unilocular character of the vesicles of chicken-pox compared with the multilocular nature of those of small-pox. Other affections here considered in detail are syphilis, herpes, eczema, impetigo, pemphigus, urticaria papulosa, acne, rheumatic sudamina, glanders, and pyemic skin eruptions.

In the diagnosis of small-pox the following rules should be observed:

1. The initial symptoms are most constant both in vaccinated and unvaccinated subjects.
2. It should never be taken for granted that the eruption on the trunk is just like that on the face and extremities, but in every case a careful examination should be made.
3. All cases of vesicular eruption occurring in the same house with a small-pox patient are not necessarily small-pox.
4. In a large number of vaccinated subjects the disease is so mild that the patient feels perfectly well as soon as the eruption appears.
5. Care should be taken in ascribing small spots on the face to digestive disturbance without first observing the patient carefully.

Mistakes in diagnosis are most frequently made in times when the disease is not prevalent.

Variola or Small-Pox.—DUXBURY (*Boston Medical and Surgical Journal*, February 13, 1902) writes concerning the recent epidemic of small-pox in Manville,

Rhode Island. After handling over fifty cases, he has no hesitancy in stating that they were genuine cases of small-pox. A majority of them were of a mild form, though there were a few in which the eruption covered nearly every bit of the external surface of the body. The history and symptoms of these cases correspond with those stated by our leading authorities as typical of the disease. No one symptom is pathognomonic, but it is the regular succession of the symptoms that is truly diagnostic of the disease. The headache and pain in the back were so severe that the patients themselves frequently offered the diagnosis. Those who doubted the true nature of the affection were those who had not only not seen one of these cases, but had not even seen during their professional career a case of small-pox.

The average age in fifty-one cases was fourteen and one-half years. The lesions in every case progressed to their final destruction in regular order. The shot-like feeling, the vesicular element, the umbilication, the corrugated appearance, were all present one after the other, and finally cicatrices were left to mark the site of the disease. The epidemic lasted throughout June, July and August.

Notes on One Hundred and Fifty Cases of Small-Pox in Private Practice.—SOILAND (*Journ. Amer. Med. Assn.*, 1901, vol. xxxvii., No. 14).—In view of the fact that many doubt that the prevailing epidemic is small-pox, and prefer to call it pseudo small-pox, Cuban itch, etc., the author reports his experience with one hundred and fifty of these cases in central Louisiana. He does not hesitate to call them genuine small-pox, and denies that they could have been confounded with any other affection. The course of these cases followed that laid down in all text-books, with the exception that the secondary fever was low. The onset was usually sudden, with high temperature and pain in the back. The last symptom proved to be quite diagnostic, and would not yield to medication before the eruption appeared. In thirty-four cases the eruption was confluent. In these cases large casts were thrown off from the four extremities, a condition which never exists in varicella. There were lesions on the palmar surfaces of the hands and the plantar surfaces of the feet. Delirium was present in all severe cases. The course ranged from three to eight weeks. It was not possible from the prodromal symptoms to state whether a discrete or a confluent case would follow, as in a number of instances the most severe prodromes would be followed by a mild eruption, and *vice versa*. One case proved fatal, and that of the hemorrhagic type. The hemorrhage took place in the papules before they were mature, the skin resembling that of erysipelas.

Not one of these cases had been vaccinated, and not one person who had been successfully vaccinated contracted the disease. Three hundred and fifty persons in all were vaccinated, and not one of these contracted the disease, though daily exposed. The author lays special stress on the following observation: When a member of a family was stricken, the other members were at once vaccinated. Perhaps two or three would respond favorably, while others would not. These latter were vaccinated as often as practicable, but would get no reaction. After several weeks, when the other members of the family had recovered, those who had failed to respond to vaccination would invariably contract small-pox. The author is in doubt as to whether or not vaccination retarded the outbreak in these cases.

An Unusual Type of Small-Pox with Fatal Termination.—LEROY, Nashville (*American Medicine*, 1901, vol. ii., No. 10), reports a case in an epidemic of small-pox occurring across the State line from Guthrie, Kentucky, in which the mortality was sixty per cent. Many of the cases presented the following characteristics: The patient was exposed to the disease fourteen days previously and had the characteristic premonitory symptoms. On the third day of illness the eruption appeared. On the seventh day it

was fully pustular and quite diffuse. The symptoms were mild and recovery was predicted. On the eighth day all of the pus became rapidly absorbed, leaving the skin loose where the pustules had been. It presented no appearance of rapid desiccation, nor was any darkening or central retraction of the pustules present, as is the case when ordinary desiccation occurs rapidly. Great prostration occurred, with symptoms of profound septic poisoning. Swelling and disfigurement disappeared. Death occurred upon the ninth day. There was no pus in any of the pustules at the time of death.

Remarks on Vaccination in Relation to Skin Diseases and Eruptions Following Vaccination.—VAN HARLINGEN (*Phil. Med. Journal* January 25, 1902).—Since papers which have appeared on this subject are scattered in many special journals, the author has condensed in this paper a short description of the skin affections occasionally met with in connection with the inoculation of vaccine virus.

According to the classification of Morris, these are divided into two groups: eruptions due to pure vaccine inoculation, and those due to mixed inoculation.

Secondary inoculation sometimes occurs between the formation of the primary vesicles and the eighth day; in such cases the secondary vesicles and the primary ones mature at the same time. Cases of this kind are apt to occur in establishments for preparing vaccine lymph, the virus being conveyed from the hands to other parts of the body. *Urticaria*, *vesicles* and *bullæ* frequently occur in the neighborhood of the vaccination, the immediate result of the irritation caused by the vaccine virus. These usually develop within the first three days. *Roseola*, *erythema*, *vaccine lichen*, *purpura*, etc., sometimes follow the development of the vaccination vesicles, and are due to the absorption of the virus. They are without exception angio-neurotic in character. *Vaccinia herpetica* is analogous to a general outbreak of an infectious disease following a period of incubation. Tyson describes such a case, in which the lesions resembled those of small-pox. *Eczema*, *impetigo* and *psoriasis* sometimes occur as sequelæ of vaccination. Unless they occur with or immediately after vaccination, they should not be attributed to the influence of the latter. The inoculation of *syphilis*, *leprosy* and *tuberculosis* is very rare. Excepting in the form of lupus, no authentic case of tuberculosis has been reported. A few cases of syphilis and leprosy were reported when arm-to-arm or human-crust vaccinations were made.

The influence of vaccination upon the course of previously existing affections of the skin has never been carefully investigated. In a few cases the author has noted such an influence. In the great majority of cases vaccination did not appear to influence the course of the more common diseases of the skin. In the main the shield is useless and detrimental, serving to retain moisture, keeping in the secretions, and thus acting as a cultivation house for pathogenic germs.

Small-Pox and Vaccination with Special Reference to Glycerinated Lymph.—DOCK (*Journ. of Amer. Med. Assn.*, December 21, 1901), in summing up his observations with reference to glycerinated lymph, maintains that if it is properly raised and prepared, it offers less danger of septic infection than any other kind of vaccine virus. Notwithstanding the disadvantage of slow drying, it is to be preferred to dry points as made at present. Any variation from the characteristic features of the vaccine vesicle must be looked upon as evidence of imperfect protection.

Virus that produces imperfect lesions should not be used, since it causes an unfounded feeling of security without always producing immunity. Every physician should have a knowledge of the natural history of normal vaccinia. Histories of all cases of small-pox, varioloid and chicken-pox should be ascertained and recorded carefully, with special reference to vaccination. Makers of vaccine should give clear and explicit statements as to the quality of their prod-

uct, aside from its freedom from pyogenic germs. Careful tests on monkeys should be made in order to maintain a proper standard. A government station for making and testing virus should be established. Public vaccinators should have careful training for their work.

A Century of Vaccination.—CRANDALL, New York (*American Medicine*, December 7, 1901), in a careful review of vaccination and its results since the days of Jenner, concludes that the experience of more than a century has confirmed and strengthened his teachings, except upon the single point of the duration of immunity. He summarizes as follows: The first lesson cannot be better stated than in the words of the Berlin Board of Health: "Vaccination in infancy renewed at the end of childhood renders an individual practically as safe from death from small-pox as if that disease had been survived in childhood, and almost as safe from attack."

The duration of immunity is variable. In many cases the procedure above is sufficient for life protection, while in a limited number immunity is lost in five or six years. In an epidemic, vaccination of all who have not been vaccinated within five or six years gives all the benefit of a reasonable doubt. Those who were vaccinated in infancy and childhood should be vaccinated at least once in adult life. The immunity produced depends upon the thoroughness of the process, and this is shown in a measure by the character and number of the scars. Vaccination in infancy is not sufficient to prevent small-pox among the adult population.

Compulsory vaccination is a measure warranted by more than a century of experience; optional vaccination has not proved sufficient. The mild compulsion in this country by requiring vaccination or evidence of its recent performance upon admission to the public schools, deserves the hearty support of parents and physicians alike.

Vaccination and Small-Pox.—DURGIN, Boston (*Boston Medical and Surgical Journal*, January 30, 1902).—To secure absolute immunity from small-pox a child should not only be vaccinated when very young, but should be subjected to repeated vaccinations until it no longer takes effect, thus exhausting all susceptibility to the disease. This should be repeated at ten or twelve years of age, and later in life on exposure. Some serious cases of small-pox occur among those who have been successfully vaccinated in infancy. In the republic of Mexico humanized lymph has been used exclusively for ninety-seven years. The preparation has been carefully supervised by the government. They never revaccinate, neither do they have small-pox among the vaccinated.

The occurrence of small-pox among the vaccinated in this country may depend upon our carelessness or a possible deterioration in the bovine lymph which has been in almost exclusive use for thirty years. There should be a more uniform and careful technique. Asepsis is absolutely necessary. Scraping off the outer skin and bringing a redness is sufficient. The shield is, on the whole, a nuisance. The physician should always see the patient within a week and revaccinate him if there is no typical vesicle. Its appearance may be delayed for a period of twelve days when glycerinized lymph is used. At this time there are one hundred and seventy-five cases in the Boston hospital for small-pox.

In 1872 there were thirty per cent. of deaths; in the present epidemic thirteen per cent. Under the statute law of Massachusetts, every child must be vaccinated before it attains the age of two years. An amendment to this law allows any child to attend school who can bring a certificate from a physician stating that it is an unfit subject for vaccination. The anti-vaccinationists are utilizing this amendment on the grounds that no person is a fit subject for vaccination.

The Vexed Question of Vaccination—What is the Best Method of Securing Immunity from Small-Pox.—GOOD (*American Medicine*, 1901, Vol. ii., No. 20) points to the favorable results recently obtained in both this and oriental countries through vaccination, and laments the fact that in spite of such convincing arguments there are still those who believe it inefficient. Fully convinced of its efficacy, the author presents a number of points concerning vaccination that require solution. Chief among these is the question as to the frequency with which it should be repeated, the length of the acquired period of immunity, the modifying effects of extraneous conditions, etc. He maintains that those who have claimed that the glycerinated lymph possesses no superiority over the dry, lack proper experience. Their statements are not founded on careful statistics. In view of differences of opinion that exist among physicians, and because of the want of knowledge on certain points and the lack of confidence that has been engendered in the public mind, he suggests that Congress should appoint a commission whose duty it would be to consider the following points:

1. Does one attack of small-pox give absolute immunity? If not, for what time is immunity accorded?
2. How soon after an attack of small-pox can vaccine vesicles be produced by careful vaccination with a good virus?
3. Should a person be considered not immune if, having had an efficient vaccination some few years before, a revaccination produces vaccinal possibilities?
4. The importance of carrying out control tests with one species of virus from four to six weeks after the original vaccine had apparently taken.
5. What kind of lymph is it most safe to rely upon, and what is the most approved technic.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Ligation of the Abdominal Aorta for Aneurism.—MORRIS (*Annals of Surgery*, February, 1902).—This is the fourteenth operation of the kind recorded, all the patients having died; one of them having lived forty-eight days, however, a warrant that the operation may in the future be performed successfully. Morris' patient, a woman of twenty-four years, had suffered from symptoms of the disease but four months, but the tumor was large and pulsated violently. A rubber catheter was tied around the aorta, midway between the tumor and the bifurcation, then a clamp applied instead of a knot, this being allowed to project out of the abdomen. It was the intention to leave this in place only until clots might have formed in the sack. Pulse and respiration increased greatly after the ligation, and it was nine hours before the normal was restored; the legs remained cold for several hours while great pain in them existed. In twenty-six hours after operation the aneurism had ceased to pulsate and nearly disappeared, hence the catheter was withdrawn one hour later. The pulsation in the femorals returned at once. Sensation in the legs returned promptly, as did sphincteric control, and a successful outcome was expected, but infection caused the death of the patient, fifty-three hours after the operation. At the autopsy it was found that gangrene of the intestines had occurred at the point where the clamp had touched them, hence the infection.

Abdominal Injuries.—LEXER (*Berliner Klinische Wochenschrift*, December 22, 1901).—The first case presented is one of a man forty years of age, who, six

years ago, was shot in the abdomen, there being six perforations of the small intestine. An immediate laparotomy, suture of the openings, dry cleansing of the peritoneum, and complete closure of the abdominal wall resulted in perfect recovery; at no time since has he experienced symptoms which might have been caused by the old injury.

The next patient was injured by a train; a large hole was torn in the right side of the abdomen, and a part of the omentum crushed off; no intestinal trauma was sustained, and upon the wound being tamponed with gauze he made a perfect recovery. But after his discharge there ensued a hernia in the scar; this, however, does not keep him from hard work.

Every case of knife or gunshot wound of the abdomen is to be followed into the depths and a complete laparotomy done if the peritoneal cavity is found to have been opened. The only exception to this rule is found in cases where the chest has first been penetrated; that is, where abdominal symptoms cannot be recognized or are secondary to others emanating from the earlier course of the missile. Still the abdominal injury may be by far the more dangerous of the two, hence the importance of its diagnosis. A life may be saved by opening the abdomen in such a case, while the operation brings scarcely any fresh danger with it though done in vain, as Lexer proves by another case which he relates.

Subcutaneous injuries of the abdomen are much more uncertain in their indications; what many take for shock may be hemorrhage or peritonitis, and while the doctor waits for the shock to pass, the patient is rapidly getting far beyond the hope of rescue. Lexer relates the history of two interesting cases which prove that the vomiting of bile as well as the symptoms of intestinal paresis are to be seriously taken as indications of intestinal rupture. One of these was operated upon several days after an injury and died, while the other was better treated as a result of experience, and consequently rescued by an operation which was performed some fifteen hours after he had been hurt. Another case was that of a man who had been kicked in the belly by a horse; there were the most severe abdominal symptoms, though none which were absolutely indicative of one certain trauma, so laparotomy was performed at once and all symptoms disappeared immediately, the patient recovering completely.

Internal hemorrhage is easier to diagnose, but at the same time more dangerous; especially to be feared in this connection is the injury of the liver. The most prompt help can often be of no avail.

December 9, 1901.—Two cases are related which prove the truth of that which has just gone before: one was that of a school-boy who had been run over by a wagon; the other that of a sailor who had been caught between a tightly stretched hawser and the wheel-box.

There are other dangers to abdominal cases which urge an early operation:

1. A crushed intestine may later become necrotic, so lead to perforation and peritonitis.
2. Abscesses may form in the neighborhood of such injuries.
3. Chronic ileus may supervene upon the adhesions and constrictions that follow spontaneous healing of injured gut.
4. So-called blood-cyst may by its very size become an object of danger to its possessor.

In conclusion, it must be said that a relatively small number of these cases recover unless operation is performed.

A Death from Chloroform.—POIRIER (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, No. 2, Tome xxvii.).—This case, the first ever experienced by this distinguished surgeon, presented a striking peculiarity, in as much as death was not due to cardiac or respiratory disturbance; but the patient suddenly expired while asleep, twenty minutes after the operation had commenced. The patient was a woman of fifty-eight years, who had been suffering from gastric trouble until she had become extremely weak. One instant the muscles were contracted, but the next the respiration as well as the heart-beat had ceased. All

artificial means were resorted to to restore the patient, but without avail. Between 30 and 35 gm. of the drug had been used with the utmost care, and the rest of the bottle, when examined by the city chemist of Paris, was pronounced "good." The author excludes the ordinary causes of death during chloroform narcosis, and insists that the extraordinarily weakened condition of his patient was the chief factor in bringing about the accident.

Emergency Herniotomy and Enterectomy.—HEWITT (*Journal of the Association of Military Surgeons*, vol. 10, No. 3).—Five days after the strangulation of a femoral hernia, and with no assistance except such as was rendered by laymen, the author performed the above named operation at a signal station in Alaska, the patient being a man of forty-five. The constriction was incised and the gut (four inches of small intestine) stitched into the sack; but four days later one inch of it had to be resected and an artificial anus established. Several months later a secondary operation was done, the abdomen being opened and the herniated gut divided, an end-to-end anastomosis made and the excluded portion left to shrink in the inguinal canal. The patient made a perfect recovery, passing his Murphy button on the eighteenth day.

Round Duodenal Ulcer.—LASPEYRES (*Centralblatt fuer die Grenzgebiete der Medizin und Chirurgie*, Bd. v., No. 1).—The statistics on the perforation of such a lesion are decidedly interesting to the surgeon; this accident has happened, according to different authors, in forty-two per cent. to sixty-nine per cent. of all cases. The portion of the gut most frequently affected is the anterior wall of the upper horizontal segment; hence perforation into the free peritoneal cavity is the rule. Of course any of the neighboring organs may be invaded after adhesion to the same has formed, or localized abscesses may be formed; where these latter occur between the layers of the mesentery, they may burrow to the skin of the back.

Traumatic Rupture of the Spleen with Slow Hemorrhage.—COVILLE (*Gazette des Hopitaux*, January 28, 1902).—The course of this case was so different from that of those usually reported, that the author considers it worthy of publication. On the day after a hard fall the patient, a woman of sixty-five, noticed a severe pain in the left side; on the next day she noticed in addition a gradually increasing swelling. This continued to grow in size until she was seen, when fluctuation was felt in it, but it was at no time highly sensitive. About three weeks after the accident the woman, who was still able to be up and about, was operated upon, and more than a liter of partly clotted blood evacuated from the peritoneal cavity. A rent in the spleen from which blood was still flowing caused the surgeon to remove that organ as the only means of saving the patient from a repetition of her symptoms.

Surgical Aspect of Intra-Cranial Tumors.—DUNN (*American Practitioner and News*, No. 1, 1902).—An interesting case is reported; a boy of twelve who had sustained a hard fall on the back of the head some three years previously is affected with headache, vomiting, dilated pupils, impaired vision, etc.; he lacks sphincteric control, has a staggering gait, walks to the left with the head thrown back; hence, the author concludes that he has a tumor in the middle cerebellar lobe of the right side. Upon the operating-table there was found a cyst, which was drained, whereupon the symptoms disappeared until reaccumulation occurred. A second operation was performed and a better drainage established by the use of rubber tube, since which time the little patient has remained well.

Artificial Pneumothorax as Preparatory Operation in the Extirpation of Tumors of the Chest-Wall or of the Lung.—DOLLINGER (*Centralblatt fuer Chirurgie*, January

18, 1902).—Opening of the pleura is by no means a dangerous procedure when it does not occur too suddenly. Convinced of this fact the author made an artificial pneumothorax a few days before he resected parts of three ribs for sarcoma. During the operation there was less disturbance in the narcosis than is observed when the pleura is opened in the course of such a procedure. It may then in general be called safer, according to Dollinger, to open the pleura some time (one day) before the resection of a part of the chest-wall. In two cases there were no post-operative disturbances, and the lung was well filled out two weeks later.

The New Operative Treatment of Extrophy of the Bladder by the Method of Prof. Soubotine, of St. Petersburg.—KATZ (*Le Progres Medical*, February 1, 1902).—This most ingenious method deserves the serious consideration of every surgeon who may be called upon to combat the terrible malady under discussion. The author begins his article with a description of the plight in which these patients find themselves, in consequence of the exposure of the vesical mucous membrane. Next are considered the various procedures which have been undertaken for the relief of so undesirable a condition. The idea of Soubotine is to substitute a portion of the anal sphincter for the absent vesical sphincter, and at the same time to fashion out of a part of the rectum a container for urine, the same to be absolutely separate from that which is left for the accumulation of fecal matter. After resection of the coccyx an anastomosis between bladder and rectum is made, and then from the anterior wall of the rectum is cut a flap, surrounding this new opening; the flap is brought together behind and the resulting bag acts as a new bladder. The remainder of the rectal ampula is sutured, and the canal re-established, though narrower than before. At a second operation the anterior wall of the bladder is to be closed completely. Two patients thus treated can go four or five hours without passing urine, have perfect control of the new sphincter, and are in every way satisfied with their new condition. Certainly no such improvement has ever been attained by the use of any of the older methods formerly in vogue.

Some Indications for Gastro-Enterostomy.—MAYO (*International Journal of Surgery*, February, 1902).—The author bases his conclusions on sixty-four such operations, a number which must be regarded as sufficient to warrant definite conclusions. The operation is indicated in malignant disease only if obstruction be present; four of sixteen cases were lost by the author. For open ulcer this operation is of the greatest value, especially if the lesion be near the pylorus; the author lost but one of thirteen such cases. In benign obstruction and dilatation, gastro-enterostomy is of chief value; such a stomach is drained from its lowest point, and, as a result, the cure is immediate and lasting; but one case out of thirty-five of this class was lost by this operator.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

Clinical Observations with Agurin (a New Theobromin Preparation).—L. MICHAELIS (*Deutsche Aertztezeitung*, 1901, No. 24).—Theobromin has for some time been known as our most efficient diuretic. Owing, however, to its irritating character when taken into the stomach, attempts have from time to time been made to combine it with other salts so as to produce a substance that, while retaining the

diuretic power of theobromin, might lack its quality of irritating the gastric mucous membrane. Until recently the most successful of these compounds was the double salicylate of theobromin and sodium, known as diuretin. Even diuretin is, however, somewhat irritating, and often, especially in cardiac dropsies, where its beneficial action would be most striking, we find the stomach unable to retain it. This drawback is entirely obviated in a new preparation, agurin, consisting of five parts of theobromin acetate and two of sodium acetate. It is thus considerably richer in theobromin than is diuretin. Moreover, the sodium acetate is not only unirritating in contrast to the sodium salicylate of theobromin, but has itself a slight diuretic power. These advantages over diuretin, that we would theoretically expect agurin to possess, have been carefully tested by Dr. L. Michaelis in the Staetisches Krankenhaus of Berlin. After having used it in a large number of cases, he failed to find a single instance of unpleasant effects, either upon stomach or heart. One patient with chronic parenchymatous nephritis, who, during a four months' stay at the hospital, vomited almost daily, did not vomit once during the four days in which he took fifty grains of agurin daily. Its diuretic power he found at least equal to that of diuretin, and, like the latter, he found it most efficient in dropsies due to valvular disease of the heart. Its activity is much increased when administered in combination with digitalis. Since, unlike the latter, it acts not upon the heart, but upon renal apparatus, it is most efficient when the kidneys are intact. A mild nephritis, however, especially of the chronic interstitial type, does not entirely inhibit its activity.

Agurin is a white powder of a slightly bitter taste, and easily soluble in water. The average dose for adults is fifteen grains three times daily. It is better to give it dry than in solution, since the latter, owing to the gradual setting free of theobromin, is not stable. It seems destined to form a valuable addition to our therapeutic armamentarium.

The Hydriatic Treatment of Pneumonia.—L. BRIEGER (*Centralblatt f. d. Ges. Therapie*, No. 1, 1902; *Wien. Klin. Wochenschr.*, No. 23, 1901).—In children, the author uses prolonged (up to ten minutes) hot baths of a temperature of 99° to 101°, followed by the dry pack. Even in feeble children he has found this procedure quite safe; not so in the aged or obese. In the latter he uses the thoracic pack. A towel wrung out in water at room temperature is wrapped around the chest and covered with a dry cloth. If the temperature is high, the pack is changed frequently until it falls to 100°. Then the pack remains *in situ* till profuse perspiration is produced. It is well to administer warm drinks during this procedure; heavy drinkers must receive alcohol. The sweating is continued as long as the pulse permits, then the patient is washed for a short time with cold water. This method has been especially useful in grippe-pneumonias. In a number of cases of grippe-pneumonia in diabetics, Brieger has, he feels sure, prevented imminent death. In a young, corpulent drunkard the infiltration disappeared under this treatment, although a marked cyanosis and an intermittent, irregular pulse seemed to render the prognosis unfavorable. Brieger believes that he is following the method of nature, which, in the profuse sweating during the crisis and in the subsequent rapid recovery, shows us how we may best aid our patient. The above described sweating process probably accomplishes its beneficial results by relieving the congestion of the overfilled lungs.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

Soluble Ferment in Cultures of Tubercle Bacillus.—(*Compt. Rendu. de la Soc. de Biol.*, T. lii., No. 11.)—It has been demonstrated that in a medium of monobutyryl a six-months'-old culture of the bacillus tuberculosis produces an acid reaction within twenty minutes after inoculation. This is due to the presence of the ferment first described by Hanriot. It has also been found in cultures of the *Aspergillus niger* by the same observer.

The Demonstration of Tubercle Bacilli in Butter and Margarine.—MARKL (*Wiener K. Woch.*, No. 10).—Forty-five guinea-pigs were inoculated intraperitoneally with forty-three specimens of butter and two specimens of margarine bought in the open market in Vienna. Nine of the animals showing no effects after eight weeks, were re-inoculated. Of these forty-five animals, ten died after a very short time, of peritonitis. Seventeen died after some time, with severe diarrhea. True tuberculosis was not observed in any of these cases. In one case a condition of pseudo-tuberculosis was manifest, due to some acid-fast bacterium.

Tuberculous Milk.—NONEWITSCH (*Centralb. f. Bak. Infect. u. Parasitk.*, Bd. xix., No. 24).—Search was made for the tubercle bacillus in the milk from a number of women and cows. The following results were obtained:

(a) Woman's milk:

1. A. M., aged twenty-six years, three days post-partum. Cough. Nothing abnormal in the chest. Weak constitution. Tubercle bacilli found in the milk in great quantities.

2. A. G., aged thirty-six years, eight days post-partum. Cough. Nothing pronounced in physical examination of chest. Well nourished. No bacilli in the milk.

3. M., twenty-seven years of age, five days post-partum. Dry cough with rales all over chest except in the apices. Milk contained many tubercle bacilli.

4. D., aged twenty-four years, six days post-partum. Slight dullness in the right lung. Many tubercle bacilli found in the milk.

5. and 6. These were two private cases which showed no tubercle bacilli.

Thus, it can be seen that tubercle bacilli were found in three out of the six observed, a percentage of fifty per cent.

(b) Cow's milk. Only cows from the best dairies were studied:

1. Fifteen head of cattle, eleven cows, two steers and two calves. In five of the cows the tuberculin reaction was positive. The milk from the eleven cows was carefully examined, but tubercle bacilli were found only in the milk from the five cows which showed the tuberculin reaction.

2. Out of nine cows of different kinds, seven showed the tuberculin reaction, and of these seven only six showed tubercle bacilli in the milk.

3. Thirty-two cows and four steers were examined. The tuberculin reaction was present in three of these cases. Two cows showed tubercle bacilli in their milk.

4. Five cows and one goat were examined. The goat did not show the tuberculin reaction, but tubercle bacilli were found in its milk. The cows were not tuberculous in this series.

5. Out of twenty-two cows examined indiscriminately throughout the city of Wilna, tubercle bacilli were demonstrated in the milk of twelve of them.

Tubercle bacilli, then, were found in fifteen cases out of sixty-three examined, a percentage of twenty-five. It is probable that tuberculosis is thus manifested in even higher amounts, because in this investigation only cows from the best appointed stables, etc., were examined, whereas the meaner stock would surely show a higher percentage.

Iodophilia.—EDWIN A. LOCKE and RICHARD C. CABOT (*The Journal of Medical Research*, vol. vii., No. 1).—Iodophilia is the reaction which certain of the white cells of the blood show when a dried blood film is brought into contact with a drop of the following solution: Iodine, one gram; iodide of potassium, three grams; water, 100 c.c.; gum arabic, fifty grams. These writers observed a number of cases in the Massachusetts General Hospital. In certain pathological conditions, such as septicemia or uremia, the uniform yellow coloration of a blood film stained with this solution is broken by the appearance in the protoplasm of the polymorphonuclear neutrophils of reddish-brown granules, or a diffuse brownish discoloration, and by the presence of small and large masses outside the corpuscles similarly colored. This reaction may be intracellular and extracellular. These writers came to the conclusion that the brown masses outside of the corpuscles are present in small numbers in all blood, both normal and abnormal, but frequently in such minute quantities as only to be found after long searching. Only an increase of these masses is to be considered pathological. They have been found uniformly and markedly increased in diabetes mellitus, variably in chronic or very severe acute suppurative diseases, and rarely in a few other conditions. In general it can be said that the increase of extracellular iodophilia is of little significance. The intracellular granules, however, have never been observed in the blood of normal individuals, and their presence is always pathological. Like leucocytosis, fever and the diazo reaction, iodophilia signifies not a special disease or condition, such as abscess, but a general toxemia such as might be produced by an abscess, gangrene, uremia or malaria. Iodophilia is not identical, neither does it coincide in its indications with any of the ordinary physical signs, as leucocytosis, fever, etc. It appears to be certain evidence that the patient is sick. It has not been observed except in severe cases, and hence these observers think that it is in this respect more reliable than either leucocytosis or fever. A "positive reaction" occurs in the following conditions: infection with pyogenic organisms, whether local or general; toxemia of bacterial origin, as in diphtheria and typhoid; non-bacterial toxemia, *i. e.*, uremia; disturbances of respiration; grave anemia, both primary and secondary.

The sign was never observed in pleurisy, rheumatism, extrauterine pregnancy, alcoholism, abscesses with free drainage, lead poisoning, early malignant disease, nervous conditions, tuberculosis if uncomplicated with secondary infection, and various other diseases.

The technique of application of the test is as follows: A cover glass film is prepared in any of the usual ways and allowed to dry in the air. Without fixation it is pressed down upon a drop of the iodine solution on a slide, and examined with an oil immersion lens. In making the preparation it is well to use slightly more of the mixture than is necessary to cover the film, in order to bring the fluid in contact with all the cells, and then squeeze out all the excess by gentle pressure on the cover glass, lest the dense color of the fluid obscure the field.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

The Treatment of Habitual Abortion and Prevention of Premature Birth of Dead Children.—RICHARD LOMER (*Zeitschr. fuer Geb. und Gyn.*, vol. xlv., No. 2).—Etiological factors of the greatest importance in this category of cases are syphilis, disturbances in the kidneys, and pathological processes in the endometrium. All these conditions are characterized by the fact that they cause certain lesions of the placental tissue due to rupture of blood vessels. Reasoning that all these conditions can be benefited by potassium iodide, he used this drug in all cases of habitual abortion during the whole course of pregnancy, even if there were no signs of syphilis. Since these patients usually show marked signs of anemia, he made it a rule to combine the iodide with an iron preparation. The results obtained with this treatment were, in the author's cases, the histories of which he gives in detail, strikingly good, and encourage an extensive trial of this procedure. In his conclusions he states that possibly the good effect of the iodide in all these cases, syphilitic or non-syphilitic, may be explained by its faculty to prevent the rupture of the placental blood vessels.

Rupture of the Pregnant Uterus in Line of Old Scar.—PEHAM (*Centralbl. fuer Gyn.*, January, 25, 1902).—Based upon several reports in literature, and observations of his own, the author arrives at the conclusion that artificial abortion is justified and indicated in all cases where at the preceding pregnancy a rupture of the uterus occurred and was treated by drainage only. Among other histories he gives a very instructive one, which tends to show the difficulty of estimating the greatness of an injury done at a preceding confinement. The findings in a patient who sustained an extensive laceration of the uterus at her third confinement were, thirty days after this confinement, the following: Uterus well involved, in normal position, its motility somewhat impaired. A scar can be felt on the right of the cervix reaching up to the internal os; immediately above the latter there is a small depression covered with mucous membrane. In the right parametrium a chord is palpable of the thickness of a pencil. This scar was the result of a rather large laceration involving the cervix, the lower uterine segment, and a part of the corpus uteri. The patient was seen again, being three months pregnant. Abortion was produced, and after the uterus was emptied the scar could be felt dangerously thinned.

The Age of First Menstruation on the North American Continent.—GEORGE J. ENGELMAN ("Transactions Am. Gynecol. Society," vol. xxvi., 1901).—Based upon 19,405 observations as regarding the first menstruation in American girls, the author arrives at the following conclusions: American women are, as to the time of functional development, very much more precocious than the women of other continents in the same region of the temperate zone, more precocious than the people from whom they sprung—an average age of fourteen on this continent and of fifteen and five-tenths in Europe. The present inhabitants of this country are more like the true native American—the American Indian. The difference, due to social status, as indicated by the laboring class of the dispensary, and the better situated, from private practice, is inappreciable—fourteen and two-tenths and fourteen and three-tenths; while in European countries this causes a difference of fully two years in the development—frequently more. Mentality,

surroundings, education and nerve stimulation stand out prominently in this country as the factors which determine precocity.

Gas in the Fallopian Tube.—MAUCLAIRE (*Bull. et Mem. de la Soc. Anat. de Paris*; Rev. in *Jl. of Obst. and Gyn. of Brit. Emp.*, January, 1902) notes a condition that some systematic writer may classify some day as "pyosalpinx." On abdominal section the diseased tube was found adherent to uterus, omentum and small intestines. In separating the tube it ruptured and a little pus escaped, then some gas issued from the cavity of the dilated tube. It was free from putrid or fecal odor. The tube was removed and a Mickuliez drain passed into the pelvic cavity. The patient made a perfect recovery.

On Simultaneous Ectopic and Intrauterine Pregnancy.—HANNA CH. VILSIN (*Mittheil. aus der Gyn. Klinik in Helsingfors*; *Ref. Centralbl. fuer Gyn.*, January 11, 1902).—By a careful study of the literature—going back to the eleventh century—the author was able to collect sixty-eight unimpeachable cases of this condition, to which he adds one observation of his own. Some of the most interesting results of his painstaking investigations are the following: In twenty cases both children reached entirely or almost full term. Interruption of the intrauterine pregnancy has a by far slighter effect upon the further development of the extrauterine pregnancy than *vice versa*. Disturbances in the blood circulation in close neighborhood of the uterus, caused by the rupture or abortion of the pregnant tube, are in many cases responsible for the premature interruption of the intrauterine pregnancy. In twenty-five cases the ectopic fetus reached full term. This fact is striking. Engstrom does not consider this a mere accident, but believes that the increased afflux of blood to the pelvis, on account of the intrauterine pregnancy, improves at the same time the blood supply of the pregnant tube, thus promoting the development of the ectopic fetus. The diagnosis is always very difficult. During the first three months the diagnosis will be either intrauterine pregnancy complicated by pyosalpinx, or simple extrauterine pregnancy, the uterus always being somewhat enlarged in this condition. In a later stage it will be more than difficult to avoid the wrong diagnosis of a retroflexion of the pregnant uterus or intrauterine pregnancy complicated by ovarian tumor or pyosalpinx. The treatment of this condition is, of course, identical with that of ectopic pregnancy in general. [The possibility of such a condition may prevent those who are too ready with the use of the uterine sound from using it for a diagnostic purpose in cases of suspected ectopic pregnancy.—ED.]

Case of Attempted Criminal Abortion in Extrauterine Fetation.—W. D. SWAN (*Boston Med. and Surg. Jour.*, January 9, 1902).—The writer reports the following instructive case: A married woman, twenty-five years of age, had lost menstruation December 20th. February 7th she called on a female physician, who introduced instruments into the uterus for the purpose of "bringing her around." Patient was seized with violent pains on the morning of February 9th; curetted the same afternoon by two other physicians and died twenty-four hours later. At the autopsy a ruptured pregnant tube was found. Prosecution of the physician who attempted to produce an abortion was impossible, since the curettement had destroyed "all evidence of the criminal operation."

Fetation in a Rudimentary Horn of a Bicornute Uterus.—MURDOCH CAMERON (*Jour. of Obst. and Gyn. of Brit. Empire*, January, 1902).—On examination of a married woman, who believed herself pregnant, the writer found cervix and uterus displaced backward and to the left side by a large swelling occupying the right broad ligament. A diagnosis of ectopic pregnancy was made and laparotomy performed. At the operation it was found that there was a double uterus, the right half of

which was pregnant. The more interesting fact was that the pregnant half had no communication with the vagina. The author advances two explanations as to the mode in which the atretic horn became pregnant: First, by some small tubule in the cervix, which afterwards became obliterated, or by one fallopian tube grasping the other, and thus forming a continuous channel, through which the sperm could reach the imperforate sac.

PEDIATRICS.

Dilatation of the Heart in Children.—EUSTACE SMITH (*The Practitioner*, *The Post-Graduate*, February, 1902).—Cardiac dilatation to a moderate extent is far from uncommon in early life; in childhood the heart dilates with exceptional ease. It may occur in a flabby, ill-nourished or degenerated heart without any special bar to the passage of the blood from the organ. This condition may be found in anemic, weakly boys who exercise too violently, in children who grow too rapidly, in nephritis and broncho-pneumonia. It also often occurs in infectious fevers and septic states, of which diphtheria, influenza and rheumatism are examples.

Dr. Lees has called attention to the constancy with which dilatation occurs in acute rheumatism. This arises early in the attack and is accompanied by a thinning of the walls. The physical signs very much resemble a pericardial effusion. The shape of the cardiac dullness is characteristic. It reaches upward far above the third rib, and its right border is continued downwards and outwards to the right fifth interspace to join the liver dullness, instead of curving inwards in the infrasternal notch. Endocardial murmurs are usually found.

Mild dilatation does not produce any symptoms. On physical examination, the heart's apex will be found diffused and difficult to localize; the first sound is muffled and the area of dullness is widened. Sometimes the external jugular veins are unusually visible. In extreme cases these signs are increased and the pulmonary and aortic second sounds are accentuated.

Destruction of muscle tissue is carried to a greater degree in diphtheria and influenza than in rheumatism.

Very rapid broadening of the area of dullness is a symptom of the utmost moment, and if it be accompanied by vomiting, coldness of the surface and partial collapse, we should make a cautious prognosis.

After diphtheria, the heart's dullness should be examined from day to day.

A recumbent position should be enforced and the diet should be regulated with care. Fruits and starches should be avoided; the patient must be fed with milk, custards, soups, yolk of egg and stale bread.

Iron combined with strychnine should be our greatest resource as far as drugs are concerned. Alcohol is also good in certain cases.

The Action of Heat Upon Cow's Milk as an Infant Food.—DESSAU (*Pediatrics*, February 1, 1902).—Heat causes new combinations to occur in milk which are detrimental to certain nutritious elements. The calcium salts are disturbed in their combination with citric and phosphoric acids so that they are precipitated, and this destroys the antiscorbutic property of the milk. The fats are partially decomposed and the globulins and nucleins are coagulated.

But the curds forming in the infant's stomach are much finer from heated milk than from raw milk. Heated milk is thus readily digested and assimilated. The tendency to constipation can be overcome by an extra amount of sugar. The milk should not be heated to the boiling point. A correct degree of heat must be used, and when used the advantages outweigh the disadvantages.

A Contribution to the Symptomatology of Cretinism and Other Forms of Idiocy.—KOPLIK and LICHTENSTEIN (*Arch. Pediatrics*, February, 1902).—The authors describe a prominence on the hand which they have found only in cases of cretinism and in degenerates. This prominence is distinctly localized immediately adjacent to the groove which separates the palm of the hand from the forearm. It is situated on the antithenar eminence immediately over the pisiform bone. A similar prominence can be seen on the forefoot of the cat. It is not due to the habit of crawling, as it was found in a Cretin three months old.

Multiple Arthritis in a Child Two Years Old Suffering from Gonorrheal Vulvovaginitis.—ACKER (*Arch. Ped.*, February, 1902).—A colored female, two years old, when first seen had a profuse vaginal discharge which was found to contain numerous gonococci. It had existed for several days. A few days later the ankles and knees were found painful and swollen. Fever was present (100° to 103°) for several days.

The child was treated with salicylate of soda (five grains every four hours) and hot douches of boric acid solution.

Under this treatment she improved in a few days. Then tincture of iron was substituted for the salicylate.

Only a small amount of serum was obtained from a swollen knee by aspiration. It contained many leucocytes, but no gonococci.

Harelip.—RACHFORD (*Ibid.*).—This writer reports a remarkable series of cases of harelip occurring in one family. There was a marked history of tuberculosis in the family, and the mother of the children was suffering from this infection.

The first two children, born two years apart, were girls, and both had harelips and cleft palates.

As the mother approached the third confinement she became confident that her baby would be a boy and would not have the deformity. This proved true.

At the approach of the fourth confinement she was in a state of great excitement because of the fear that her baby would be a girl and have the deformity. This also proved true, and the infant had an awful deficiency of the face, but lived only a few hours.

In her fifth pregnancy she was confident that a boy would be born, which also proved true, and he was free from the deformity.

In her sixth pregnancy she was haunted with the same fear, and again a girl with harelip was born.

In her seventh pregnancy she was in the happiest frame of mind, and a boy without harelip was born.

During this time she had lost both her boys from tuberculosis, which caused her great grief.

The Present State of Our Knowledge of Infant-Feeding.—ROTCH (*Jour. Med. and Sci.*, January, 1902).—In this abstract of a paper read before the Maine Academy of Science, Rotch asserts that recent advances have enabled us to formulate certain basic principles which are well proved, and which should be adopted and worked out by individual physicians.

An infant's food in the first week of life should be rich in sugar, and the proportion should be gradually diminished to the end of the first year. He does not recommend starchy decoctions.

The quantity of milk must be adjusted to the rapidly growing stomach.

Experiments have shown that milk sugar is superior to cane sugar in preventing the decomposition of proteids.

The casein and lactalbumin should be separately considered when adjusting the food to the infant.

Biologic Relation Between Milk and Serum.—MORO (*Wien. Klin. Wochenschrift*, October, 31, 1901).—In studying the alexin bodies in the milk and serum of the infant this author finds that neither cow's milk nor human milk possesses any appreciable bactericidal properties.

Furthermore, he demonstrated that the serum of breast-fed infants possesses a much stronger bactericidal power than the serum obtained from the blood of infants fed on cow's milk.

As soon as an infant is placed on artificial food its blood rapidly diminishes in bactericidal power.

This property may also be extended to hemolysis, as it was found that the serum of breast-fed infants is more hemolytic than artificially fed infants.

A New Reaction of the Human Milk.—MORO (*Wien. Klin. Wochenschrift*, January 30, 1902).—When a few drops of human milk are added to fluid obtained from a hydrocele this latter fluid will coagulate to a firm mass in a few minutes. This does not happen if cow's milk is used.

This reaction occurs with human milk even when heated, and therefore must exclude the action by ferment.

He was unable to determine the factors engaged in this peculiar phenomenon.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

The Sensory Segmental Area of the Umbilicus.—WILLIAM G. SPILLER (*Phila. Med. Jour.*, February 8, 1902).—A report of a case of fracture of the tenth thoracic vertebra with complete compression of the cord, in which the sensory distribution could be very accurately worked out. The disturbance in the sensation confirmed Head's view that the sensory area of the umbilicus lies between the ninth and tenth thoracic areas. In this case the upper border of the anesthetic area passed directly through the umbilicus. He concludes from this case: (1) That Head is probably correct in placing the umbilicus between the ninth and tenth thoracic sensory areas. (2) That the Babinski reflex may be absent in cases of lesions of the lumbar and sacral regions of the cord, though the clinical symptoms may indicate merely that the cord is compressed above the lumbar region. The absence of the Babinski reflex in such cases may possibly be a valuable sign of disorganization of the lumbar and sacral regions. (3) That while loss of the patellar reflexes may occur from transverse lesions of the cord above the lumbar region, the cause of this loss, in a certain number of cases, is to be found in lesions of the area through which the reflex are passes.

Locomotor Ataxia and Syphilis—Clinical Lecture (Abs.).—A. FOURNIER (*The Med. Press and Circular*, January 22, 1902).—This is a very notable contribution to the problem of the etiology of tabes dorsalis by the authority who first suggested its probable solution as long ago as 1875. When Fournier first proposed the syphilitic origin of tabes, his theory received many objections, the most forcible of which was that the connection between syphilis and tabes was merely a morbid coincidence. To show how absurd this objection was, Fournier set

himself the seemingly impossible task of collecting and studying one thousand cases of tabes. This was accomplished in the course of twenty-five years, and in this lecture he presents the results of this careful study. Special attention was given to every one of these cases, so that they are in every respect trustworthy, both as to diagnosis and clinical history. Out of one thousand tabetics an unquestionable history of syphilis was obtained in nine hundred and twenty-five; that is, in ninety-three per cent. The seven per cent. remaining can be explained either on the ground that the original syphilis was so benign that it escaped notice, or that it was conceptional or hereditary. Marion has made the assertion that if syphilis was found to have existed in as large a proportion as ninety-three per cent. of patients suffering from tabes, in reality it existed in the proportion of one hundred per cent., because the remaining percentage could well come in under the limits of error. In ninety per cent. of this series the tabetic symptoms followed a syphilis which, at the onset, was benign; and by a benign syphilis Fournier means a small number of secondary symptoms, their slight nature, and their short duration. The author further believes that the graver tertiary symptoms are generally preceded by benign secondary ones. All individuals affected with syphilis have not the same chance of acquiring tabes dorsalis; certain accidental factors come into the question, among which are noted nervous exhaustion, nervous heredity, and inadequate syphilitic treatment. The whole subject of the etiology of locomotor ataxia is summed up as follows: Principal, effective, and essential cause of tabes—syphilis. Accessory factors, nervous exhaustion, nervous heredity, and inadequate treatment of syphilis at the outset.

The Corneo-Mandibular Reflex.—F. VON SOLDER (*Neurolog. Centralbl.*, February 1, 1902).—This is a new reflex, mention of which the author has not been able to find in the literature. It finds no place even in Beehterew's recent paper, "Über Reflexe im Antlitz und Kopf Gebiet" ("Reflexes in the Face and Head Region"), in which all reflexes that have been observed in this region up to this time are described. The reflex is obtained as follows: When the cornea is touched there is a movement of the lower jaw towards the opposite side. As any corneal irritation is always followed by the well-known corneal reflex, the new reflex is always accompanied by the latter. In order to obtain it, the mouth must be held somewhat open. The reflex movement is a purely transverse one, closing or opening of the mouth never having been observed. The reflex rate is slow. By a repetition the reflex movement disappears, to return, however, after a short period of rest. The observations in regard to the reflex in pathological cases have been few, although it was studied in cases of coma, delirium acutum, epileptic coma, and syphilitic softening in the pons. In these cases the corneo-mandibular reflex persisted after the corneal reflex had disappeared. Whether this new reflex has any clinical importance remains as yet a question. Possibly it may be of use in the localization of focal processes in the brain stem.

A Case of Infantile Tabes.—MARTIN BLOCH (*Neurolog. Centralbl.*, February 1, 1902).—This is a report of an additional case of tabes in a young person to be added to the constantly growing material on this subject. A clinical resume of the case is as follows: Boy, seventeen years old; no syphilitic history either in the parents or in the patient. He was never seriously sick, though always somewhat weak. Mentally normal in development. For one year or more the patient has suffered from attacks of anxiousness accompanied by palpitation of the heart, shivering, and an intense desire to micturate. For three or four years there has been ischuria and, at times, incontinence both day and night. On physical examination the patient showed marked symptoms of infantilism, the genitalia undeveloped, and the voice distinctly juvenile. The right pupil is larger than the left; the left shows an Argyle-Robertson reaction, while the right is absolutely unchanged either by light or accommodation. There is some sensory dis-

turbance about the region of the buttocks. The gait is slightly ataxic, and there is some evidence of a Romberg symptom. The upper portion of the leg shows some hypesthesia and hypalgesia. Complicated movements of the leg, when the patient is lying down, cannot be carried through on account of the ataxia. There is some hypotonia in the lower extremities. Muscular sense is slightly impaired. The knee jerks are absent on both sides. Ophthalmoscopic examination shows a bilateral temporal pallor of the papillae. The diagnosis of tabes in this case cannot be disputed. Pupil changes, Westphal and Romberg symptoms, bladder symptoms, sensory disturbances, and definite evidences of inco-ordination can mean nothing but tabes, whether they are found in an adult or in a child. The above is one of the few cases of infantile tabes in which hereditary syphilis evidently plays no role. The attacks of anxiousness and palpitation might possibly be considered as a form of heart crisis.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Note on Gauging Vesical Capacity.—LYDSTON (*Jour. A. M. A.*, February 8, 1902).—The ordinary method of injecting the bladder with fountain syringe or glass irrigating apparatus, with or without catheter or tube, to measure its capacity, is open to serious impeachment on account of inaccuracy; first, because the presence of the catheter or tube in the deep urethra will create a *besoin*; secondly, if a large tube is used the water will rush into the bladder so rapidly that the bladder is literally "surprised" into a reflex resentment; and thirdly, if the hydrostatic method is employed without tube or catheter, there is awakened bladder resentment both from stimulating the urinary *besoin* and surprising the bladder muscle.

Symptomatically cases may be divided into two classes: those in which the abnormal calls to urinate are worse at night, and second, those in which the greatest frequency is during the waking hours. The former are mostly from an organic condition, the latter from a greater or less degree of neuropathic disturbance.

To measure bladder capacity in the first class a hypodermic of morphia is very useful; so, too, an application of eucaïn or cocain to the prostatic urethra. A small catheter should be used, save in the exceptional instances in which sphincteric resistance is easily overcome and the hydrostatic method without catheter can be used under relatively low pressure. Sterile water or normal salt solution is best for distending the bladder.

In the second class it is only necessary to have the patient drink moderately of pure water during the evening, and, when aroused at night by a desire to micturate, to pass water on each occasion in a separate vessel. The greatest quantity obtained at any given micturition represents the maximum capacity of the bladder from a clinical standpoint.

The Accuracy of the Negative Roentgen Diagnosis in Case of Suspected Calculous Nephritis and Ureteritis.—LEONARD (*The Phila. Med. J.*, February 1, 1902).—The absence of the shadow of a calculus in a negative showing certain definite details is conclusive evidence of the non-existence of all calculi in that region. It is essential, however, that the technique shall be faultless and that the operator shall have sufficient ability to properly interpret the negative, whether it is sufficient in detail and what the shadows represent. The high penetrating power of the

rays necessary for fluoroscopic examinations renders calculi of little density invisible, and hence this method is of small value. Out of 206 suspected cases calculi have been shown by the skiagraph in sixty-five. In one case only where the Roentgen diagnosis was negative was a stone found, though many of the cases in which a negative diagnosis was rendered have been operated upon. The error in this case was due to a faulty position of the plate, the shadow of the stone not falling upon it at all. In three other cases of negative diagnosis the patients subsequently passed small calculi. Here the error was made in interpreting the negative.

Considering the harmlessness of this method and that the percentage of error so far in the negative diagnosis is less than two per cent., it is certainly preferable to other methods.

The ability to detect stones in both kidneys or ureters, to exactly locate them, to observe their size and number and thus to fix the field of operation, are points of no mean worth.

The Technics of Nephropexy as an Operation per se and as Modified by Combination with Lumbar Appendicectomy and Lumbar Exploration of the Bile Passages.—EDEBOHLS (*Annals of Surgery*, February, 1902).—Movable right kidney and appendicitis frequently co-exist, and the author advocates examining and removing the appendix through the lumbar incision made for anchoring the kidney. So, too, diseases of the bile passages, such as cholelithiasis, cholecystitis, pericholecystitis, etc., may be found accompanying nephrotosis. While it is an unsettled matter in regard to operating upon the gall-bladder and bile ducts through the lumbar incision, they may in the average case be just as satisfactorily examined through it as through the usual anterior incision. Lumbar appendicectomy is performed by opening the peritoneum to the outer side of the ascending colon. Through this incision the appendix may be delivered into the wound, examined and removed, according to the method practiced by the operator. By enlarging this opening in the peritoneum sufficiently to admit of free access to the gall-bladder, bile ducts, liver, duodenum, pylorus, etc., much knowledge may be gained about them through palpation, and even without opening the peritoneum much positive information of a negative character may be obtained.

The author does not hesitate to do bilateral nephropexy at one sitting. He used ether as an anesthetic in all but four of his 186 cases reported. Six of his cases which had nephritis before the operation, obtained a permanent cure of the disease from it.

It is interesting to note that the author makes a longitudinal lumbar incision, bluntly separates the fibers of the latissimus dorsi muscle, draws out of the way the iliohypogastric nerve, or, if impossible, cuts it (with subsequent suturing), luxates the kidney with its fatty capsule through the wound, and dissects off and removes the whole of the fatty capsule. If removal of the appendix is indicated, replace the kidney temporarily in the abdomen, open the peritoneum and deliver the appendix into the wound. After either inverting or amputating it, and after replacing the intestines, explore by palpation the duodenum, common bile duct, cystic duct, gall-bladder, under surface of the liver, and pylorus. Having again delivered the kidney through the wound, the capsule proper is divided along the convex border and each part dissected from the organ half way to the pelvis. Four fixation sutures of forty-day catgut are passed through these flaps and under the attached portion of the capsule, two near each pole of the kidney. These sutures are now passed through the abdominal parieties. The wound in the muscles and fascia is closed with interrupted forty-day catgut sutures, then the fixation sutures are tied. All of these sutures are buried by closing the skin over them with intra-cuticular suture. Apply the dressings smoothly, as the patient is to lie upon the back for a week before changing. The author's mortality in 186 cases has been three. No attempt is made to anchor the kidney as high up as

normal, but rather in such a position that the lower pole may extend as far below the crest of the ilium as the upper extends above the lower border of the twelfth rib. The patient is placed upon the table with the abdomen downward, having the author's air-cushion under the upper portion of the abdomen. A slight degree of mobility after recovery is not incompatible with success, as there may be some stretching of the connective tissue fixation bands. Unless the kidney can be crowded upward so as to cause it to disappear under the ribs, it is regarded as anchored in the loin sufficiently for all practical purposes.

Tuberculosis of Bladder, with Report of Case.—MARKLEY (*Illinois Med. Jour.*, February, 1902).—After reviewing the subject, Markley reports the case of a young woman, unmarried, of thirty years of age, who had Pott's disease eight years previously, from which she entirely recovered. For three years she had bladder trouble, with almost constant desire to urinate. Tubercle bacilli were demonstrated in the catheterized urine. By means of a Kelley speculum the interior of the bladder wall was inspected. This discovered a deep irregular ulcer the size of a nickel on the left posterior wall of the fundus of the bladder with a granulating base, the rest of the bladder seeming healthy. A saturated solution of silver nitrate was applied to the ulcer three times at intervals of a week, the bladder being irrigated daily with chinosol, ten grains to quart of water. The patient completely recovered in about eight weeks, has remained so for a year, and has gained thirty pounds in weight.

A Case of Stricture of the Urethra in a Female, Complicated with Enuresis, Dilatation of the Bladder, Ureters and Kidneys.—TUCKERMAN (*Cleveland Med. Gazette*, December, 1901).—The author reports a case of a girl, five years of age, which he had under observation from February 28, 1899, to April 20, 1900. Patient had always had bowel trouble and suffered a good deal from colic. With a previous history of frequency of urination, from her fourth year she wet the bed at night and her clothes during the day constantly. Local examination revealed a fissure running from anterior border of the anus to the fourchette, and an incarcerated clitoris. Attention to these gave apparent improvement. April 12th she was suddenly taken with pain in the loins, severe dysuria and the passage of blood in the urine; the pain chiefly on the right side, shooting downwards towards the bladder, being strongly suggestive of renal calculus. The bladder was distended, reaching up to the navel. A stricture of the urethra, No. 10 Fr., was detected at its proximal end. This was dilated to 24 F. and the bladder emptied with a catheter every three or four days, there being always some residual urine. The patient greatly improved under treatment until April 17, 1900, when she presented herself with pain in the back and loins and some fever. These symptoms rapidly grew worse, until she suddenly died, April 20th.

At the autopsy the bladder was found dilated, with greatly thickened walls. Both ureters were dilated irregularly throughout their whole extent, and likewise the pelvis of each kidney, the cavity encroaching on the substance of the kidney itself. The whole urinary tract contained pus. The ascending mesocolon was continuous with the mesentery, and allowed as free movement of the ascending colon as of the small intestine itself. This condition doubtless explained in part the colic and bowel trouble of which the patient suffered.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Vaccine Virus—Its Preparation and the Complications Attending its Use.—

JOSEPH MCFARLAND, M. D. (*The Jour. of Amer. Med. Ass.*, January 26, 1902).—Dr. McFarland gives in this article a very interesting description of the preparation of the bovine virus. As this knowledge is no doubt of great value to every physician, we give this part of the article in full:

Bovine Virus.—The continuous propagation of vaccine virus from heifer to heifer is said to have originated with Negri of Naples about 1842, and to have required about forty years for its advantages to be so widely appreciated as to permit its introduction into most of the European countries and our own as well.

The advantages of the bovine virus are almost beyond dispute. The vaccinia is kept growing in animals for which it is natural, and in which it can be supposed to maintain its most natural degree of virulence. It is secured from animals whose healthy condition can be determined beyond any doubt, and from animals in which the dreaded human diseases cannot occur. The micro-organisms contained in the bovine virus are nearly all of forms which produce no disease of man. There is no possibility of the transmission of syphilis, and no probability of erysipelas, gangrene, septicemia or other of the affections referable to human virus.

Preparation.—In every well-regulated vaccine establishment some modification of the following routine is carried out: Small calves or heifers are received in a special part of the establishment and subjected to a careful toilet. They are curried and brushed, the hoofs trimmed and the feet washed. The entire skin is then washed very thoroughly, a disinfectant usually being employed, then washed out with sterile water. After remaining until the time for operation in a warm stable, they are next taken to a modern operating room, strapped to a table, and shaved over both thorax and abdomen. The skin is washed with soap and water, then with a disinfectant solution, and finally with sterile water, after which the hairy parts are covered with sterile towels and the denuded skin dried. Scarifications more or less extensive, according to the taste of the operator, are next made through the superficial layers of the skin, no blood being drawn, and the virus is rubbed into the scarified area with a spatula.

After this the animal is transferred to the hospital of the institute to await the development of the vesicles. Scrupulous cleanliness must be observed in the hospital, and the temperature should be carefully taken and every precaution adopted to keep the calf well and its lesions free from secondary infection. After the lapse of about six days the vesicles are "ripe" and along the lines of scarification elevated grayish-yellow vesicles covered with macerated epithelium appear. When ready for the removal of the pulp, the calf is again taken to the operation room, placed on the table, given a thorough toilet, and dried. The operator then removes the "pulp" covering the vesicles with a moderately sharp curet, again being careful to draw no blood. The material thus collected is the "vaccine pulp." Different producers employ different methods in utilizing this material. Some reject all the superficial material as unfit for use and collect the clear lymph which subsequently exudes, but the majority use the pulp itself, either spreading it upon points or mixing it with glycerin.

It is evident to anyone possessed of even a small amount of bacteriological knowledge, that in spite of the precautionary measures mentioned, it must be impossible to secure sterile pulp. Indeed, every vaccine contains three classes of micro-organisms: 1. Those specific for vaccinia. 2. Those normally living

upon the skin of the animal. 3. Those accidentally entering from the dust of the stable. As a rule, all forms are harmless, but it is only those of the first class that are desirable, for whether they are usually harmless or not, it is doubtful whether any well-informed physician of the present time would prefer to introduce into his own tissues or those of his patients any unnecessary micro-organisms.

Ivory Points and Glycerinized Virus.—The ivory point, spread with the pulp or with the exuding lymph below it, is a device which was so far superior to the "scab" that it met with a world-wide reputation and approval, but it is subject to disadvantages that must be mentioned now that still better preparations are before us. The ivory point is spread with matter rich in bacteria. It is true that many bacteria are killed by drying, but it seems equally true that most of those clinging to the ivory remain alive, probably because of the film of albumin with which they are surrounded. At all events, the death of the bacteria takes place so slowly that the vaccine organism itself dies before the bacteria, and they are never gotten rid of.

Seeing this disadvantage, Dr. Moncton Copeman in 1891 devised the method of mixing the pulp with sterile glycerin of first quality, by which the contained bacteria were slowly destroyed, while the vaccine organism, whatever it is, remained alive. Copeman recommended the method in unqualified praise as being the method by which the bacteria can be destroyed and the vaccine organism preserved.

There are great advantages in this method, for it is eminently desirable that the bacteria be destroyed, and it is very gratifying to note that the profession is sufficiently awake to these advantages to now demand them.

There are, however, certain disadvantages. The resisting power of the vaccine organism is insufficient to enable it to endure the action of the glycerin much longer than the bacteria, and by the time that the bacteria are destroyed its own vitality is threatened. For this reason, virus is usually placed on sale while it still contains a few bacteria, thus, to a limited extent, defeating the very object in view. However, all must admit that it is better to have a few than a great many bacteria in the virus.

Antiseptic viruses are sold by some producers. They are made by the addition of a germicide to the virus, so that the bacteria are destroyed and the vaccine organism uninjured. This form of virus can still be regarded as in an experimental stage.

Treatment of Epithelial Skin Cancers and Non-Parasitic Sycosis With the X-Ray.—J. F. RINEHART, M. D. (*Phil. Med. Jour.*, February 1, 1902).—The author reports four cases of epithelioma and one of non-parasitic sycosis cured by the X-ray. Dr. Rinehart's method differs somewhat from the usual procedure. He exposes the part with the usual lead sheet about healthy skin to the rays successively every day for several days, or until there is a very mild reaction. The time of exposure beginning at five minutes, at a distance of six inches, and increased a minute a day until reaction occurs. After a definite redness has been produced the sittings cease and the ulcer begins to heal. More exposures are finally given if necessary. He sounds, though, a note of warning as to too long and close exposures in the beginning of treatment. Great caution is necessary to prevent ugly burns. It is best to try a couple of exposures and then wait a few days for the reaction.

In watching the result of the rays upon the non-parasitic sycosis (in which case the hairs fell out), it occurred to the author that the effect of the rays might be in the nature of electrolysis and thus destroy the cancer cells as well as the hair bulb, instead of the reactionary inflammation to which this effect is usually ascribed.

Researches on the Parasitic Nature of Eczema and the Eczema Staphylotoxine.—BOCKHART (*Monatshefte f. Praktische Dermatologie*, 1901, T. xxxiii., p. 421; *Annales de Derm. et de Syph.*, December, 1901).—Of all the work done in the last years upon the etiology of eczema, there is probably none so important as this of Bockhart's, as it gives us a clue to the various manifestations of the disease and opens a broad field for future research. His conclusions are as follows: Eczema is an infectious inflammation of the epidermis, produced by the staphylococcus, in the following manner: The healthy follicle of a predisposed individual contains the live but inactive staphylococcus. These organisms attain an acquired vitality from some internal or external source acting upon the skin, which changes or increases their nutritive conditions, and in consequence there is excreted the staphylotoxine. When this staphylotoxine is diffused into the epidermis it produces a serotactic effect and the formation of papules or vesicles. The follicular papule or vesicle contains serum and staphylococci, while those near the follicle, or perifollicular ones, are often sterile. After a time the cocci increase in the follicular vesicles, producing an emigration of leucocytes; still later the sterile vesicles in the neighborhood are infected by the passage of the cocci through the lymph channels and edematous epidermis; then the serous contents is changed by the subsequent leucotaxis. The purulent transformation of the vesicles or the persistence of this leuco-serous state depends upon the plasmine of the staphylococcus. The vesicles finally open, the moist eczematous surface and its neighborhood become infected by the staphylococcus containing a great quantity of a very active staphyloplasmine. Then there is produced the purulent or pyogenic conditions which complicate an eczema (impetigo and furuncles). If the eczema becomes chronic, then there supervenes other conditions in the cutis and subcutis not directly due to the staphylococcus.

Colloid Degeneration of the Skin.—C. J. WHITE, M. D. (*Jour. of Cutaneous and Genito-Urinary Dis.*, February, 1902).—This is probably the fifth undoubted case of this affection yet recorded. It occurred in an Irishman, fifty-two years old, who had always enjoyed the best of health. For the last ten years he had been constantly exposed to the extremes of weather. The lesions appeared four years ago upon the back of one hand, and two years later many similar lesions occurred upon the exposed parts. He has no subjective symptoms. The individual lesions are smooth, flat, from one-eighth to one-fourth inch in diameter, irregularly rounded or polygonal, translucent, of yellowish-brown color, soft, elastic and almost gelatinous to the touch. The papules are upon the backs of the hands, cheeks, outer canthus of each eye, and upon the tragus, antitragus and pinna of the ears. Histologically, the stratum corneum is hyperplastic and stratum lucidum more pronounced than usual. Stratum granulosum and spinosum are thinned. There are no mitoses or pigment in the epidermis. In the corium the papillae have disappeared, and in their places are found dense zones of degenerated elastic tissue (elacin) which follows down by the sides of the hair follicles to meet the tumor mass below. Within this zone of elacin is the tumor proper, consisting of small or large irregularly shaped islands of tissue bounded at intervals by capillaries whose walls show thickened masses of elacin. Within these enclosing capillary walls the true colloid material appears, composed of coarse granules which stain yellow with picric acid.

Oidiomycosis of the Skin and Its Fungi.—H. T. RICKETS (*Jour. of Med. Research*, December, 1901).—The cases of so-called blastomycetic dermatitis have continued to multiply since the initial description of the disease and the demonstration of its causative factor, the budding blastomyces, by Gilchrist. Chicago has proved a particularly rich field in this respect, and from there have we had some of the best articles upon the affection; but our eyes glistened with admiration when we received December number of the *Journal of Medical Research*.

Dr. Ricketts, of Chicago, occupies the whole of this issue by an exhaustive brochure of five hundred and forty-five pages upon "Oidiomycosis (Blastomycosis) of the Skin and Its Fungi." In this work he enters exhaustively into the history and literature of this group of organisms and their pathologic action upon man and animals, reviews most critically all the reported cases of blastomycetic and protozoic dermatitis, and reports some additional ones. The text is beautifully and fully illustrated.

He concludes his most elaborate and painstaking observations as follows:

1. The so-called protozoic disease of Posadras, Wernicke and others; Busse's and Curtis' saccharomycosis hominis, and Gilchrist's blastomycetic dermatitis are various manifestations of the same disease.

2. The condition in the skin possesses constant clinical and histological characteristics which separate it positively from all other skin diseases, particularly verrucous tuberculosis, carcinoma, and syphilis.

3. The organisms from various cases differ in minor respects among themselves, but are so closely related morphologically and biologically as to justify their inclusion in a common genus, *oidium*; they are thus analogous in a pathogenic sense to the fungi which cause actinomycosis, and to those causing trichophytosis.

4. The variations among the organisms allow the recognition of three morphological types:

a. Blastomycetoid or yeast-like.

b. *Oidium*-like.

c. Hyphomycetoid.

5. There are two histological forms of the disease in the skin, the eosinophilous and non-eosinophilous, the former being associated with the mould type of the organism.

6. In accordance with conclusion 3, oidiomycosis is an appropriate term for the conditions caused by the organisms, and oidiomycosis cutis for the disease as it occurs in the skin.

7. Aside from the infections considered in this communication, certain cases which have been described in the literature from time to time indicate that *oidium*-like organisms may cause other severe pathological conditions in man.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

Malignant Disease of the Nose and Accessory Sinuses.—GIBB (*New York State Jour. of Medicine*, January and February, 1902).—Malignant disease of the nose and accessory sinuses is not common, though sarcoma is not so rare as statistics seem to indicate. The author has observed quite a number of cases. The most usual site of sarcoma is either the septum or middle turbinate bone. In the nose, sarcoma progresses more slowly than in other parts of the body, and does not exercise so great an influence on the general health. The symptoms are, in the main, similar to all obstructive diseases of the nose. A very early symptom is epistaxis, and it is present in nearly every case; inspection shows the nose to contain a reddish, fleshy-looking mass, which bleeds easily when touched with a probe. Pain is often absent, though may be severe when the sinuses are involved. The tendency of the growth is to extend by way of the natural channels. No period of life is exempt, as cases are reported from early childhood to old age. Nearly all forms of sarcoma are met with in the nose, though the round and spindle-cell varieties are most frequently found. The diagnosis is, as a rule, not difficult,

and can usually be made from the clinical picture, but oftentimes the microscope must be resorted to. Some authors object to the removal of a portion of the growth for microscopic examination, owing to the danger of exciting more rapidity of growth. The microscope is not infallible, as the author has known of cases where the microscopic diagnosis was that of malignancy and the subsequent course of the cases proved it to be fallacious. More frequently the symptoms suggested malignancy, and the microscope failed to confirm it in cases which subsequently proved the microscopic diagnosis in error. The prognosis is unfavorable, as the records show but few recoveries. Success depends on the complete and thorough eradication of the growth. Small growths may be removed by intra-nasal methods, but the majority are seen when the disease is too far advanced, and more radical measures must be resorted to. The author could find records of only two cases in which Coley's fluid had been used. One of these cases had been operated upon and the good result was based on the operation, while in the others there was no benefit following the use of the toxins.

Primary carcinoma of the nose is rare. Its favorite site is high up in the nose, in the region of the sphenoid cells. The progress is rapid, as a rule, and the rapidity of its growth is undoubtedly accelerated by surgical interference which stops short of complete eradication of the growth. Unlike sarcoma, carcinoma spares no tissue, it spreads rapidly into the sinuses, involving both the hard and soft tissues, and breaking into the cranial cavity. As in other parts of the body, its progress is marked by excruciating pain. The early symptoms of carcinoma are, in many respects, similar to all growths in the nasal chambers. The two symptoms which should put us on guard are vascularity and pain. Pain is present very early and is of the same unmistakable lancinating character observed in cancer in every region of the body. The diagnosis is not difficult when well advanced and is confounded only with sarcoma. The appearance of carcinomatous growth is pale, resembling a mucous polyp, but it is firm and bleeds easily when touched, while sarcoma has a red, fleshy appearance. The early involvement of the cervical lymphatics in carcinoma is also an aid in the diagnosis. The so-called cylindroma of Billroth is the only variety that shows little tendency to recur, and that offers any favorable prognosis. All others admit of no ground for a favorable opinion. The treatment must be radical.

Sarcoma of the naso-pharynx is rare. Of the twelve cases reported, all seemed to have their origin from the vault. Sarcoma of this region gives rise to few symptoms until it becomes large enough to cause obstruction. Recurrence after operation takes place almost immediately. Carcinoma of this region is even less frequent. Only nine cases are reported. The progress is rapid and the treatment can only be palliative.

Primary malignant disease of the accessory cavities is rare. Five carcinomas and three sarcomas are reported. In one case of sarcoma there was no return after removal for eight years. The carcinomas all proved fatal in a short time. The author, in a tabulated form, gives the history, age, sex, seat, nature and duration of growth, side affected, treatment and results of one hundred and eleven cases of sarcoma, and forty-eight cases of carcinoma of the nasal chambers, twelve cases of primary sarcoma, and nine cases of primary carcinoma of the naso-pharynx, five cases of primary carcinoma and three cases of primary sarcoma of the accessory sinuses.

Abscess of the Temporal Lobe Following a Chronic Otorrhea Cured by Operation.
 —HOLSCHER (*Muench. Med. Wochenschrift*, No. 40), reports a case of abscess of the temporal lobe following a chronic otorrhea in a male aged eighteen. The patient was first seen on June 17th. The cause and duration of the otorrhea not known. Six months previous the patient noticed a bloody discharge from right ear, but it never caused him any trouble until June 12th, when he had a severe pain in front and back of head. He also claimed to have had a chill, with

fever. Two days later he consulted a physician, who removed a large polyp from the external auditory canal. The following day he had a severe chill, headache with dizziness, and vomited several times. When he entered the hospital (June 17th) his temperature was 38.50° C., pulse 114. Had severe headache, especially in front and back of head and back of neck. His head was pulled backward. Pupils were normal. No nystagmus. The sensorium was clouded. The external auditory canal was filled with foul-smelling pus, and the posterior upper wall was bulging markedly, almost filling the entire lumen of the canal. Nothing abnormal could be detected about the mastoid process. A radical operation was performed that evening. A sinus was found in the external auditory canal, leading into a cavity in the mastoid process, which was filled with cholesteatomatous material. This was removed and the dura exposed, and also the lateral sinus, but nothing abnormal could be detected. The wound was packed with iodoform gauze. The headache and fever continued, and on the 21st of June his pulse went down to 60. The gauze was then removed from the wound and a marked flow of pus followed, which came from the upper wall of the tympanum. A sinus was found which led up into the temporal lobe. The removal of the probe was followed by a large amount of foul-smelling pus and necrotic brain tissue. The pulse went from 60 to 150, but soon came down to 100. The upper wall of the middle ear cavity was removed and the abscess cavity packed with gauze. His headache was better and seemed to get along nicely until the evening of the 25th, when he began to have severe headache again. He was given an anesthetic and the wound enlarged. He improved steadily and recovered without any further mishap. On the 16th of July he was examined in a clinic for nervous and mental diseases, but symptoms of any nervous or mental disturbance could not be detected. Patient has since returned to his work.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

The Class of Cases of Simple Chronic Glaucoma in Which Operation is Not Advisable.—C. S. BULL (*Med. News*, January 18, 1902).—Bull insists that chronic simple glaucoma should be regarded as essentially different from chronic glaucoma with acute exacerbations—*i. e.*, chronic congestive or irritative glaucoma. He points out that the three cardinal signs of simple chronic glaucoma—reduction of vision, contraction of the field, and cupping of the nerve-head—constitute precisely the symptom-group of an entirely different disease, namely, simple atrophy of the optic nerve. The differential diagnosis, in the last analysis, depends on the *presence* of increased intraocular tension (glaucoma) or its *absence* (optic atrophy). In the early stages of glaucoma these periods of increased tension are frequently evanescent, and the elusive symptom is apt to evade discovery unless tests be repeated several times on the same day and on different days. Application of the finger-tips directly to the sclera (instead of to the skin of the closed lids, in accordance with the usual practice) is believed to permit a better appreciation of minute differences in intraocular tension. In the later stages tension increases appreciably, and remains permanently higher than normal.

Iridectomy and sclerotomy are ineffective in reducing *normal* tension, and hence should only be resorted to when the tension is raised. Before attempting operation it is important to note the condition of the filtration angle, which is narrowed and apt to be closed in hypermetropic eyes; in myopic eyes, on the contrary, it is wide and less likely to be occluded. Repeated perimetric examina-

tions (preferably by different observers in order to eliminate personal error) which uniformly show progressive nasal and peripheral contraction would, in general, indicate operation; but great care should be exercised not to confound true glaucomatous defects with those due to disease of the retinal vessels. Scotomata are the forerunners of subsequent defects, and thus offer a fairly reliable prognostic guide.

The appearance of the disk is often of little value for differential diagnosis, as the atrophic excavation of simple atrophy implanted on a physiologic cupping may produce an ophthalmoscopic picture in no wise distinguishable from that of a depression due to glaucoma. Many cases, moreover, present pupils responsive to light, as well as normally deep anterior chambers. Post-operative hemorrhage is always to be feared in the presence of arterial pulsation, which, however, is not diagnostic.

Iridectomy is indicated if (1) under myotics the field which is but moderately contracted widens, and central vision improves, (2) tension is increased, (3) the iris is mobile, (4) moderate cupping of the nerve-head exists. Iridectomy should be done early, and is more likely to be permanently curative the higher the tension. High tension after operation usually means an unfavorable result.

Iridectomy is contraindicated if (1) central vision be greatly diminished, (2) tension be greatly increased, (3) deep cupping of the nerve-head exist, (4) contraction of the field has approached the fixation point.

Medical treatment in non-operative cases consists in the use of the myotics, eserine and pilocarpin. In favorable cases their use maintains vision and prevents further contraction of the field, at least for a long period. They are of no avail unless they "contract the iris and lower the tension."

Eserine is the more powerful, but is apt to produce ciliary congestion and occasionally follicular conjunctivitis. The salicylate and hydrobromate are preferred. To overcome the tendency to ciliary hyperemia the addition of cocaine to the solution is recommended.

Pilocarpin should be substituted for eserine as soon as the tension has diminished. It has the very positive advantage over eserine in that it does not bring about congestion of the ciliary processes. Morphine hypodermatically may be used as an adjuvant to both myotics. If the tension increases, eserine should again be resorted to.

In addition to the myotics, gentle massage of the globe twice a day may deepen the anterior chambers and increase vision. Any refractive error should be fully corrected and the general regimen of the patient carefully regulated.

[The introduction of cocaine into a solution of eserine, with a view to decreasing ciliary hyperemia, is hardly to be recommended. Cocaine is a fairly efficient mydriatic, and even in relatively small proportion probably interferes, in some degree, with the myotic action of eserine. It is possible to avoid much of the pain, "twitching," and other unpleasant effects of eserine, while retaining its myotic efficiency, by instilling it in very minute quantity. This can readily be accomplished by employing a dropping-tube with a tip drawn to an extremely fine point. The point of the dropper is introduced beneath the surface of the solution (eserine sulphatis, two grains; aquæ, one ounce) and by capillary attraction picks up a small fraction of a minim. It will often be found that as small a quantity of the myotic as is contained in a column of liquid 1 mm. high will suffice to produce a *full* myosis.—ED.]

BOOK REVIEWS.

THE JOURNAL OF MEDICAL RESEARCH. Volume VII., No. 1. New Series, Vol. II. January, 1902. Being the Continuation of the Journal of the Boston Society of Medical Sciences. Edited by HAROLD C. ERNST, M. D.

This number keeps up the excellent record made by the previous ones. It contains a number of most interesting communications to the field of medical research. The first article, written by Edwin O. Jordan, of the University of Chicago, is entitled "Notes on the Occurrence and Habitat of *Anopheles Punctipennis* and *Anopheles Maculipennis* in the Valley of the Androscoggin." It embodies the experiences of Prof. Jordan during a six months' search and study of this genus in the hilly parts of New Hampshire. An abstract of this excellent article is to be found in the February issue of this publication. Another very valuable communication is that by Hill on the branching of the bacillus diphtheriæ. Ohlmacher's work on the morphologic variations of certain pathogenic bacteria is also noteworthy.

This meritorious publication, the *Journal of Medical Research*, certainly is a solidly constructed scientific journal, and deserves united support on the part of the profession. While its articles, as is implied in the name of the publication, deal with original research, and are necessarily limited to embodying the efforts of the original workers in the more scientific parts of medicine, still the general practitioner will profit considerably by having such a scientific volume as this an integral portion of his library.

ANATOMY, DESCRIPTIVE AND SURGICAL. By HENRY GRAY, F. R. S., Lecturer on Anatomy at St. George's Hospital, London. Thoroughly revised American from the 15th English edition. In one imperial octavo volume of 1246 pages, with 780 illustrations. Price, with illustrations in black, cloth, \$5.50, net; leather, \$6.50, net. Price, with illustrations in colors, cloth, \$6.25, net; leather, \$7.25, net.

The new edition of this standard text-book is brought to date by a thorough revision of all chapters and the rewriting and elaboration of some sections, particularly those on the Brain, Spinal Cord, Nervous System and Viscera. Several hundred new illustrations have been added, and the number of colored illustrations largely increased. The scope of Gray's Anatomy is too well known to every practitioner to necessitate further mention; suffice to state that the present volume is of such value as to justify its continuance as the standard text-book on this subject.

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY. For Practitioners and Students. A Complete Dictionary of the Terms Used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the kindred branches, including much collateral information of an encyclopedic character, together with new and elaborate tables of Arteries, Muscles, Nerves, Veins, etc.; of Bacilli, Bacteria, Micrococci, Streptococci; Eponymic Tables of Diseases, Operations, Signs and Symptoms, Stains, Tests, Methods of Treatment, etc. By W. A. NEWMAN DORLAND, A. M., M. D., editor of the "American Pocket Medical Dictionary." Second edition, revised. Handsome large octavo, nearly 800 pages, bound in full flexible leather. Philadelphia and London: W. B. Saunders & Company. 1901. Price, \$4.50, net.

A large first edition of the work was issued in October, 1900. From the day of its publication the book met with a remarkably large sale, and the edition was exhausted in eight months. This immediate success was doubtless due to certain special features which distinguish this work from other books of its kind. The avowed object of the author has been to furnish in a volume of convenient size an up-to-date dictionary, sufficiently full for the requirements of all classes of medical men, or, in other words, to give a maximum of matter in a minimum of space and at the lowest possible cost. This object has been secured by the use of a large page, thin bible paper, and a flexible leather binding. The result is a truly luxurious specimen of bookmaking.

In this edition the book has been carefully revised. The author has also added upward of one hundred important new terms that have appeared in medical literature during the past few months. Among them appear "Anopheles," "Cryosecopy," "Johimbin," "Hemolysin," "Hedonal," "Sacrectomy," etc., words that have recently come prominently before the profession, and which, of course, are not to be found in any other dictionary.

Other valuable features of the book are to be found in the complete and satisfactory definitions, the etymological references in the original languages, and the clear method of indicating the pronunciation. There are over one hundred new tables, and the illustrations add greatly to the usefulness of the book.

In the preface the author avows his intention of making the work represent as fully as possible the live literature of the medical sciences by keeping it in all respects thoroughly up to date.

The illustrations and tables are worthy of special mention, and aid materially in making it a dictionary of superior value. The convenience of the work due to the thinness of paper, lightness of weight, and the flexible binding are a welcome change from the heavy, bulky dictionaries heretofore published.

VENEREAL AND SEXUAL DISEASES. By HACKETT and ARONSTAM. 208 pages. Price, \$1.00. Published by G. P. Engelhard & Co., Chicago.

This work, of the Standard Monograph Series, treats of its subjects in an elementary and concise way. It is divided into four parts. In the first part gonorrhea and its complications are considered. Parts II. and III. are devoted to chaneroid and syphilis. Part IV., consisting of the functional disorders of the male generative organs and the most important sexual psychopathies, is an entirely new departure in works of this kind, adding much to its value. The book is intended for students and the busy practitioner.

A TREATISE ON THE ACUTE INFECTIOUS EXANTHEMATA. By WILLIAM THOMAS CORLETT, M. D., L. R. C. P., London. About 400 pages. Royal octavo. Price, cloth, \$4.00; half-russia, \$5.00. F. A. Davis & Co., Philadelphia, Publishers.

No book has been published in the last year which so opportunely fits the present need of the profession as this one of Dr. Corlett. The country has lately been so rife with variola, varicella and impetigo that this most excellent publication is doubly welcome. Some thirty-five of its pages are devoted to the early history of the acute exanthemata, while the subjects of variola, vaccinia, varicella, scarlatina, rubeola and rubella are extensively discussed. The feature of the book which particularly commends itself to us is the clear and concise manner in which the author describes the initial lesions of the different diseases and the important points of differential diagnosis. But Dr. Corlett is peculiarly adapted for this part of the subject, being an expert clinician in diseases of the skin. One familiar with the objective symptoms of all forms of skin diseases is particularly well equipped to write upon the acute exanthemata, for he can appre-

ciate from experience the confusion which may arise in confounding these with the ordinary non-infectious eruptions. Upon this rock many a beautiful diagnosis has been wrecked.

At the present day, when we must look upon every papular and pustular eruption with suspicion, a good, practical knowledge of the common skin diseases is, indeed, often necessary to exclude a diagnosis of variola, for varied and confusing are its manifestations in the modified form. One can easily make a diagnosis of a typical case of any of the exanthemata; it is the anomalous ones which tax our knowledge.

The author has thoroughly appreciated these difficulties, so with beautiful and accurate pictures and well-written text he has given us the benefit of his great experience.

KURTZGEFASSTES LEHRBUCH DER KINDERHEILKUNDE FÜR AERZTE UND STUDIRENDE.

Von Dr. CARL SEITZ, A. O. Universitäts Professor und Vorstand der Kinderpoliklinik in München. Second enlarged edition. Berlin. 1901. S. Karger. G. E. Stechert, 9 E. Sixteenth street, New York, Agent. Price, paper, \$2.70.

This work on pediatrics ranks among the best European text-books. While American pediatricists differ from European authorities on many points in the feeding of infants, it is recognized that Germany is the source of the most progress even in the care of children. This work is eminently satisfactory, for it contains the whole subject in a very complete form, at the same time sufficiently concise for the purposes of the practitioner.

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ORIGINAL ARTICLES.

CESAREAN SECTION IN CASES OF PLACENTA PREVIA.

BY HOFRATH DR. FRIEDRICH SCHAUTA, of Vienna, Austria.

PROFESSOR OF OBSTETRICS AND GYNECOLOGY, UNIVERSITY OF VIENNA; DIRECTOR OF THE FIRST OBSTETRICAL AND GYNECOLOGICAL DEPARTMENT OF THE GENERAL HOSPITAL IN VIENNA.

The introduction of Cesarean section as a possible therapeutic measure in the treatment of placenta previa is sufficiently striking as to demand a careful consideration. I therefore gladly comply with the request extended to me by Dr. Hugo Ehrenfest, of St. Louis, who recently dealt with this question very extensively,* and accordingly submit my personal views in regard to this procedure now being advocated in America.

I can only deal with the subject from a theoretical standpoint, as I have never performed Cesarean section on account of placenta previa, and probably will not do so for some time to come.

In considering this question, two points are to be kept in view: first, does Cesarean section afford a hope of reducing maternal mortality in cases of placenta previa? Secondly, shall we be able to save more children by the performance of this operation? Before attempting to answer the first question, I will consider briefly the present methods of dealing with cases of placenta previa. Speaking generally, I have for many years adopted the method of bimanual version, followed by the attachment of a weight of about three pounds to the fetal leg which is brought down through the vagina. The expulsion of the fetus, assisted somewhat by the continuous traction exerted by the weight, is left to the natural forces until the umbilicus emerges from the vulva. From this point on the case is managed in accordance with the usual mode of dealing with breech presentations.

A compilation of the cases of placenta previa treated in my clinic during the past ten years shows a total of 234, 16 of which ended fatally. It should not be assumed, however, that death in every one of the sixteen fatal cases was due directly to the placenta previa, viz., hemorrhage, inasmuch as many of these cases were admitted in a septic state, and with various injuries to the genital organs. But even including all cases, 16 deaths out of 234 cases—*i. e.*, 6.8 per cent.—is not a high mortality, especially when we bear in mind the pitiable condition in which many of these patients are brought to the hospital.

The extreme view of certain American authors who pronounce Cesarean section the only rational treatment for placenta previa in general, has been very properly repudiated by those who would confine this heroic procedure to cases of placenta previa centralis or partialis.

* *American Medicine*, January 11, 1902.

The advocacy of Cesarean section in *all* cases of placenta previa, which necessarily includes those cases, for instance, in which simple opening of the amniotic sac suffices to stop the hemorrhage, hardly deserves serious consideration, and I will therefore limit my remarks to those severe cases of placenta previa centralis or totalis. This condition was encountered fifty times, with a fatal issue in nine instances. To replace version by Cesarean section in such cases would add another great danger to that already existing. Even in the most perfectly appointed hospital it is impossible to perform such an operation immediately upon the entrance of the patient, as various preparations have to be made. Yet we must remember that delay means a diminished chance in placenta previa. On the other hand, version can be speedily performed, often without waiting until the patient is anesthetized, since the majority of cases occur in multiparae. In my experience, all immediate danger is past as soon as version is completed. If version has been performed *lege artis*, and the breech is kept pressing against the lower uterine segment (by means of the weight attached to the fetal leg), then hemorrhage is positively checked, and from this moment there is no further loss of blood. What is the situation if Cesarean section is to be performed? A deep narcosis is necessary. The uterus must be opened—a procedure always accompanied by loss of a certain amount of blood; often a copious hemorrhage cannot be avoided. After removal of the fetus, the placenta must be peeled off from the lower uterine segment. During all these procedures there is imminent danger of atony of the uterus, because serious hemorrhages in placenta previa centralis usually occur before labor pains have begun and the uterus is contracting firmly. If prior to the operation a woman has lost a large amount of blood, she will be in no condition to withstand this procedure.

Certainly, the results of Cesarean section performed in my clinic on women whose genitalia were in an aseptic condition are excellent. But the prognosis is quite different in those cases where, without strict application of the laws of asepsis in regard to the instruments, bandages, cleansing of the hands, etc., repeated examinations have been made, or where various operative procedures or tamponade, etc., have been tried. I made it a rule of my clinic to exclude from conservative Cesarean section all cases which were handled before entrance by untrustworthy people, provided the indication for operation was not absolute. My practice is to perform craniotomy in such cases. How many of the cases of placenta previa brought into the hospital will conform to this strict but indispensable requirement for the performance of Cesarean section? Very, very few, I believe.

The question whether Cesarean section promises to reduce the maternal mortality in such cases, must therefore be answered in the negative.

We now come to the second question: Will Cesarean section performed in placenta previa reduce the fetal mortality? It would seem that this question could be answered affirmatively. The fetal mortality with our present treatment of placenta previa is a high one, because we treat expectantly and refuse to perform immediate extraction as it is a procedure dangerous to the mother. Most of these children die from asphyxia, some from loss of blood. Out of the 234 cases of placenta previa mentioned above, 127 of the children died, a percentage of 54. There were 35 deaths in children in the 50 cases of placenta previa centralis (70 per cent.), leaving 92 deaths for 184 cases of placenta previa of varied types, excluding placenta previa centralis (50 per cent.). These figures

are wholly in conformity with the well-known fact given, that the mortality to the fetus in cases of placenta previa centralis is higher than in the other types. If a Cesarean section could be performed immediately after the appearance of the first hemorrhage, if at this time the fetus is alive and viable, its life could undoubtedly be saved. But if we look over the reports of these cases, we will see that only a small number of these children are fully developed. In my 234 cases, only 92 children were mature. The mortality of premature children is generally high, but is much higher in these cases because they suffer considerably by asphyxia due to the partial separation of the placenta from the uterus. But again, we have to take into consideration the cases of placenta previa centralis only. We find that out of these fifty cases only eighteen children were at full term, the remaining thirty-two being premature. This fact is of great importance and really decides the question.

I believe that, even by applying Cesarean section to cases of placenta previa centralis, we shall not obtain better results in regard to the fetal mortality than with our commonly practiced method.

I would state, in conclusion, that no one is justified in regarding Cesarean section as a simple operation, free from danger or harmless in its after-effects. It is a laparotomy, and thus is an operation in which a single lapse of the laws of asepsis or antiseptis may bring about detrimental results. The scar in the abdominal wall gives a chance for the after-development of an hernia, and this is certainly not a negligible factor, especially in working women.

For the reasons given above I do not approve of Cesarean section at the present time as a method of treating placenta previa.

Some future day will show whether my present attitude on this question is justified or not.

Vienna, February 26, 1902.

THE TREATMENT OF TUBERCULOSIS.*

BY WM. C. GLASGOW, M. D., of St. Louis, Missouri.

The treatment of tuberculosis is such a vast subject, if we enter into the details, that it will be difficult to condense it to make it suitable for this meeting. As the time assigned to me is limited, I will only speak in brief of what I consider to be the essential principles.

Before considering the treatment it will be necessary to say a few words on the pathology of the disease. Our forefathers believed that it was due to a degeneration of the cells, and that the degeneration was the result of defective nutrition. Koch and his followers attributed the disease to the tubercle bacillus; others have claimed that a certain kind of soil is necessary for the development and the multiplication of the bacillus. All of us who have had practical experience with tuberculosis have seen cases in which the sputa showed under the microscope enormous numbers of the bacillus, and at the same time the well-known constitutional symptoms of tuberculosis have been absent. These cases show very little emaciation and loss of weight, with very little impairment of vigor; they are able to perform their several duties, and some even take on flesh. I recall two cases of this kind: One a lady who had had a cough for six months;

* Address delivered before the Alumni Association Medical Department of Washington University.

she expectorated great quantities of sputa, which on bacteriological examination showed enormous numbers of the tubercle bacillus. She presented no other symptoms of tuberculosis of the lung. She was pursuing her usual social duties without any special inconvenience. After three months her cough and expectoration ceased entirely. She had gained fourteen pounds, and she considered herself practically well. During the whole time examinations of the lungs failed to show any of the usual physical signs of a tubercular lesion.

Another case was a man who came from the Panhandle of Texas in charge of a train of stock. He was coughing and expectorating great quantities of sputa. He seemed vigorous, and complained only of the cough. On examination the sputa showed a great number of bacilli; in fact, it was more like a laboratory culture than ordinary tubercular sputum. He returned to Texas, but came to St. Louis again in two months. He had gained a great deal in weight, and his cough was much improved; the sputa, however, on examination showed an increased number of bacilli. In both these cases there was great improvement in general conditions and an absence of the constitutional symptoms of tuberculosis.

The occurrence of such cases without an explanation seems to cast a doubt on the virulency of the tubercle bacillus, and it is difficult for us to understand why in one case we should have grave constitutional symptoms with very few of the tubercle bacilli in the sputa, and in another a great number of the bacillus with almost entire absence of constitutional disturbance.

I have considered these cases to be simply cases of local tuberculosis of the lung in which the tubercle bacillus has found lodgment in the gland or in a limited area of tissue, and that the toxins are not sufficient to produce the ordinary symptoms of the disease. They are analogous to the local tuberculosis seen on the skin and in the joints.

In our older books we have read a great deal about scrofula and the strumous diathesis, a condition characterized by great chronicity in the lesions, and when located on the mucous surface by thickening and a tendency to purulent discharges. Glandular enlargement was a frequent occurrence. Chronic phthisis was considered a scrofulous disease. A sharp differentiation was made between this disease and tubercular phthisis. Advance in bacteriological researches showed the presence of the giant cell and the tubercle bacillus in the so-called scrofulous glands, and at the present time these cases are generally included under the name tuberculosis. Our forefathers constantly feared that their scrofulous cases might become tubercular, and this was expressed by Felix Niemeyer when he said: "The great danger of the phthisical individual is the danger of becoming tuberculous."

It seems to me that possibly a fresh light has been thrown on the subject by recent bacteriological reports, in which it is claimed that the constitutional symptoms of tuberculosis are not entirely due to the tubercle bacillus, but rather to the invasion of cocci, streptococci, staphylococci, etc., which have become pathogenic. If this can be substantiated, many of the mysteries of tuberculosis will disappear. Felix Niemeyer's words will have to be changed, and we will use the expression: "The great danger to the tuberculous individual is the danger of becoming infected with the pathogenic cocci." Under this interpretation the words scrofula and tubercle become synonymous, but the disease tuberculosis assumes a greatly modified meaning. It must be considered as a mixed infection; first, the lodgment of the tubercle bacillus on fertile soil; second, the in-

vasion of the cocci which have become virulent and which are responsible for the manifold symptoms which we associate with tuberculosis. A possibility must be considered, the possibility of the tubercle bacillus acquiring increased virulence from the presence of the cocci toxins, and that when it exists alone it may be conservative, with its tendency to produce fibroid tissue; this would appear to be shown in the contrast between a tubercular cavity with its indurated walls and the soft irregular walls of a cavity in a streptococcal lung. We know that in other diseases the mixed infection is more virulent than the original one; for example, diphtheria is a mild disease compared with the conditions following the infection with streptococci. I cannot vouch for the truth of these views, and I only give them to you this evening in order that they may be given due consideration and thought. They appeal to me very forcibly from a clinical standpoint, and if we can accept them, our treatment of tuberculosis will be more clearly defined.

As germs are acknowledged to be the cause of tuberculosis, it is evident that an arrest or cure of the disease can only be accomplished by destroying the germs or neutralizing the influence of their toxins. The brilliant results in modern surgery has stimulated efforts to find antiseptic remedies which, when given internally, will be equally beneficial. These efforts were made, however, long before the bacterial origin of the disease was known; for example, in the tar treatment of Berkley; and this has been followed more recently by the sulphurous acid injections of Bergsen, the benzoate of soda treatment of Rokitsansky, the creosote and ichthyol treatment of the present day. Of all these, the two last are alone in use at the present time, the others have been tried and found wanting.

If we could accept the claims of the advocates of the serum treatment, we would have ideal remedies against tuberculosis in tuberculin and the anticcoci serums. Unfortunately, however, the results from the use of these serums have not been satisfactory. Serum therapy is still in the experimental stage, and we can only hope that the future will give us a reliable serum to meet the indications of tuberculosis.

As our efforts towards destroying the germs through antiseptic medication have been so unsatisfactory, what other means have we for counteracting their destructive influence? In old books we find the expression "*Medicatrix vis natura*"—the inherent power of the tissues to resist disease; in the light of our present knowledge, we would now translate it the normal cell antagonism to micro-organisms. As we have failed to arrest the disease through antiseptic medication, can we not accomplish something by this normal cell antagonism? Does not our line of treatment lie in the possibility of increasing the power of resistance of the normal cells? We can do this; and such is the trend of the modern treatment of tuberculosis. Everything which improves the nutrition of the body, which gives increased tone and vitality to the tissues, adds so much to the resisting power of the normal cell. We accomplish this by feeding, by giving the individual the greatest amount of fresh air, and by shielding him, as far as possible, from depressing influences.

Feeding—forced feeding, as it is called—is now accepted as one of the most important factors in increasing nutrition. As much food must be given as can be assimilated; the limit is fixed by the power of assimilation, and anything beyond will be more injurious than useful. Consideration must be given to the

idiosyncrasies of the individual in regard to different kinds of food. The actual condition of the stomach and intestines should be considered and everything avoided that would produce indigestion. This forced feeding is not modern. We can recall the old practice of consumptives visiting slaughter-houses and drinking fresh blood in large quantities; also the old Saulsbury treatment, which consisted in giving as much beef as the individual could digest.

We all know the influences of mind over matter—how the mind influences the vaso-motor system, and what a powerful effect results from depressing mental influences on nutrition by depressing the vitality and lowering the resistance of the tissues. I believe that mental influences are a most powerful factor in the arrest of tuberculosis. I am sure that we have all seen instances in which a depressed mental condition has antagonized our best efforts, and where a cheerful, hopeful condition of mind in the patient has been of invaluable aid to us. From statistics we know that the percentage of deaths is greatest in the insane asylums and prisons. I fully believe that the depression from the situation is even a more powerful factor in producing the disease than the confinement.

Pure air is of the greatest importance in improving the nutrition; it is an excellent tonic, and it has been found that the consumptive improves most rapidly when he is able to remain the greater part of the time in the open air. A change of air is useful in promoting vigor. We demonstrate this ourselves when we return from our vacations with greatly improved tone and power of work.

The physician is constantly called on to decide the question, shall we send our consumptive patients away from home to get better air, and to what climate or climates shall we send them? In making this decision the physician assumes a grave responsibility. The consumptive catches at any hope of relief; he listens to suggestions of friends on the advantages of different climates; he is eager to go to any place, however inaccessible, that has been recommended to him. The advice of a physician in whom he has confidence will have great influence in directing his movements. In my opinion the first thing that a physician should consider is the financial condition of his patient. Can he stand the expense of living away from home in a proper manner; that is, can he be comfortably lodged and can he get proper, nourishing food? Are the surroundings of the proposed resort suitable for one in his condition, and for one of his special disposition and temperament? Many poor unfortunates have been sent away from home with only sufficient means to pay for their transportation, with the hope that when they arrive at the chosen place they will find work by which to live. If this was always an assured thing, we could conscientiously advise the change; but we know that the labor market in the West is already overcrowded, and the probability of getting any living employment out-of-doors is very slight. The result is that they become paupers and burdens upon the community. We have seen latterly many protests from western towns against this influx of poor consumptives. In some places legal restrictions are being discussed which will absolutely prevent their entrance. These protests are not from the fear of contagion, but from the inability to take care of the increasing number of the destitute. I think that it is simply cruelty to advise such persons to make a change, and it is an injustice to his family to encourage delusive hopes of recovery under such circumstances. If the consumptive has sufficient means, there is a great choice of localities. The chosen climate should depend on the actual pathological condition of the individual, the disposition, and on the sex. A man can go away and improve

in many places where a woman would die. Some men are cheerful, hopeful, and endeavor to make the best of everything with determination to get well; they live accordingly. Others are discontented, low-spirited and prone to attacks of ennui and homesickness. They cannot accommodate themselves to their surroundings, and live in a constant state of depression. Each of these needs surroundings adapted to his individual case. Such places can be found in different parts of the country. The highlands of Georgia and the Carolinas, the Adirondacks, the plains of northwestern Texas, the elevated plateaus of Colorado and New Mexico, the deserts of Arizona, and the sunny slopes of California afford a varied choice, which may be suitable to any individual case. According to my experience, the general results acquired by a residence in these places is about the same. In some cases the disease is arrested for a longer or shorter period; in some the arrest has been so prolonged that it could almost be called a cure. In others, however, unhappily, little benefit has been obtained by the change. If there is any choice in climates, I would prefer that the patient should spend the winter in Arizona, and the summer on the elevated plains of New Mexico or Montana.

With feeding, climate and cheerful surroundings we must class intelligent medical treatment as an important factor in the arrest of the disease. A case of consumption needs as careful medical supervision as a case of typhoid fever; symptoms that arise must be relieved, otherwise the weakness and depression caused by them may undo all favoring influences; hence, I think that the presence of a competent medical adviser within reach is most important.

For numbers of consumptives who appreciate the fact that they are not able to get the benefit of a change of climate, what is called the home treatment offers a certain amount of relief. If they are in the first stages, we can locate them in the suburbs, where they can breathe pure, fresh air, and live out-of-doors as much as possible. If they have an indoor occupation, this must be given up, and one that keeps them out-of-doors must be substituted; they must be nourished to the full extent of their assimilation. In some respects such cases have an advantage over their exiled brethren: they are at home with all its comforts, they are with their family and friends, and are within reach of the usual amusements. Some cases of tuberculosis in the early stages improve more under these conditions than they would do if they were sent away, and in some of these cases the improvement is more permanent.

Sanatoria or cottage hospitals for consumptives have now a prominent place in the public mind. If we take the statistics of these institutions, showing the percentage of arrest and improvement, we would think that they are the solution of our consumptive problem. When we consider, however, that these institutions only receive selected cases—that is, cases in the earlier stages of the disease—we must doubt the value of these statistics, for such cases improve everywhere, and especially if they can receive the care and nourishment of a well-equipped hospital. In theory the sanatorium seems to offer great advantages, the patient is absolutely under the control of the supervising physician, and every movement is regulated, he receives the very best food, and his surroundings are, in many respects, most favorable. If only the earlier cases of consumption are received, there are none of the depressing influences that will be found in hospitals receiving patients in the advanced stages of the disease. The success of an American sanatorium will depend largely on the physician in charge. He must be able to obtain the respect and confidence of his patients. He will then be able to guide

and influence them; all tendency towards commercialism must be absolutely excluded. The sanatoria of Trudeau in the Adirondacks and Bowditch in Massachusetts are models of their kind.

Considering all the advantages and disadvantages of living in a hospital, I cannot help thinking that the home treatment of consumption, whether the home be in his native place or one established in a better climate, offers the best prospect for the arrest and the permanent cure of tuberculosis.

HEMATEMESIS IN PERNICIOUS MALARIA.

BY FRANCISCO T. B. FEST, of Tegucigalpa, Honduras,

PROFESSOR OF MEDICINE, UNIVERSITY OF HONDURAS.

Patrick Manson states in his famous "Tropical Diseases" (page 107): "*In high degrees of cachexia*, hemorrhages of various kinds are apt to occur—epistaxis, hemoptysis, hematemesis. . . . In such cases trifling operations—tooth extraction, for example—may prove a dangerous matter."

Experience causes me to take exception to the above statement, as far as *high degree of cachexia* is implied as the limit of said hemorrhages. In cases of severe infection, even of relatively short duration, these hemorrhages may occur as well as in chronic cases. Naturally, chronic cases are more apt to suffer. For example, it is frequently observed in the coast part of this country, women suffering from chronic malaria are predisposed to menorrhagias and metrorrhagias. In fact, this condition among the poorer classes, especially half-breeds and Indians, is the most frequent ailment for which the physician is consulted. The rapid effect of quinine and iron in many of these cases establishes their purely malarial origin.

Following are given a few cases of hematemesis under my direct observation during the last two years:

CASE I.—W. B., æt. twelve, boy, of American-Swedish descent. Up to this time was well. Tuesday evening had a chill, followed by high fever. Wednesday became comatose. During the night hematemesis and epistaxis set in. Was in a dangerous condition Thursday, when I saw him.

CASE II.—Ladino, æt. thirty-five; alcoholic. Had enlarged spleen. History of tertian attacks for about a week. Had taken daily one hundred grains quinine without benefit. The day before I was called he had a very severe chill, and had been in a comatose condition since. Found him with a temperature of $103\frac{1}{2}$, pulse 120. Since previous night there was hematemesis. According to the statement of his woman, the vomiting consisted first of a black mass, like ground coffee; later it became free blood. There was also hematochezia. The eyes had a yellow hue, and the case was considered yellow fever. Examination of the blood showed malignant tertian bodies. As hypodermic medication was refused by the half-savage attendants, I retired from the case. The man died the same day.

CASE III.—Half-breed, æt. nine. Had intermittent fever for several weeks. A kind of black vomit began about two days before. There were also sanguinolent stools. The blood of these was not coagulated. A small swallow of water would cause spasmodic vomiting, followed by liquid blood. I at once gave quinin subcutaneously, followed by a high enema of normal salt solution and followed by stypticin. After three hours the latter was repeated, with a little codein, as the vomiting was incessant. During the night the vomiting ceased. Next

morning the quinin was repeated, also the enema. Milk was given and retained. The following day administered euquinin and broth. Speedy recovery followed the above treatment. The spleen became enlarged during the illness, and remained so to a certain degree.

CASE IV.—Catalina B., æt. twenty-four, Spanish descent. Daily ague for four days. Temperature 104°, pulse 102. In the fifth month of pregnancy. Eyes and skin marked yellow hue. Spleen hard and painful. Constipated for three days, although the patient had been given one grain calomel the day before, followed by two ounces of castor oil. Complained of burning pain in stomach and bladder. Most of the time comatose and delirious. Since previous day vomiting bilious matter and free blood in large quantities. In the morning began also moderate hemorrhage from the genitals. A copious enema of pure water, bringing about evacuation was given at once, followed by a retention of enema of salt solution.

Injected one liter of normal salt solution in two administrations. Gave quinin hypodermically and stypticin in the same way. The latter was repeated every three hours. The quinin was repeated next morning, when I found the patient perspiring freely and with clear sensorium. The temperature was then only 99.3°. Gave per orementhol and codein, and afterwards a little milk, which was retained. The metrorrhagia had not ceased entirely, and I repeated the astringent during the day. Next day, no hemorrhages; gave milk, raw eggs and broth, and repeated the quinin, which was exchanged the following day for euquinin per orement. Daily gram doses of euquinin were kept up for a week. *Neither this nor the daily injections of 100 c.c. of neutral hydrochlorate of quinin had caused any abortion, in spite of the uterine hemorrhage.* The woman gained her strength only slowly, and gave birth at term to a small, weakly child *with enlarged spleen; which soon died—a case of fetal malaria.*

CASE V.—Antonio R., æt. thirty-five, ladino. Was working in a cattle ranch up to two days before death. I knew him as a strong, hard-working man, with a moderately enlarged spleen, and on pay-days fond of a spree. His illness began with chill after a day's dissipation. I found him comatose; temperature 104.1°; pulse thin and rapid; was lying a pool of blood; had free epistaxis, hematemeses and hematochezia. Injections of saline solution and other remedies were refused. He died the following night. The blood showed again the malignant tertian bodies.

Necropsy.—Only brain, stomach, liver and intestines presented abnormalities. In the brain were many dots of fine thrombi, not of the usual red color, but black; also, many engorged capillaries. The stomach was full of black blood, the walls injected, at places eroded and friable. The intestines in same condition. The spleen was large with necrotic spots and pigments. The liver also showed accumulation of pigment.

All these cases are alike in some respects. In the blood I always found the varieties of malarial plasmodia that belong to the æstivo-autumnal group described by Marchiafava and Bignami as the malignant tertian parasite. The number was always exceedingly large, and the parasite itself of enormous size, with many highly pigmented bodies present.

Not one of these patients was really cachectic. I selected these five cases because they were not cachectic. With cachectics, as Manson said, the hematemeses is not uncommon. I wish to prove the *high degree of cachexia* is not alone a causative factor in these hemorrhages. Enlarged spleen is not absolutely an indication of malarial cachexia. As a rule, most malarial cachectics show splenic tumors, yet I know individuals whose health apparently (with the exception of a spleen remaining large) is restored. I say *apparently*. They are not cachectics in the true sense of the word, as all symptoms of ill-health have dis-

appeared with no discomfort other than an irregular girdle. I met such a case in Japan; he was a good mountain climber, very good at the bowling alley, a very strong hand at the bar, and untired in the cult of Venus. Ten years before he suffered much from malaria; had to go to Europe and returned one year after in the condition I met him. Certainly he will pay some time for his irregular life, but he certainly was not cachectic at the time. In San Francisco I met a lady of apparently good health, a good bicyclist, regular visitor to the Rockies; was very active in social and charity work, yet she had a large waist due to a splenic tumor, a relic of some years' sojourn in Panama. I know also, and this time very well, a medical man who several years ago went to the south of China. Ten days after his arrival he suffered from his first ague. During his whole residence there he had always more or less a slow fever, even some apoplexy-like attacks, most likely of malarial origin, malarial hemorrhage into the brain. He spent the winter in the United States, and came then to Central America; began his career there in a swampy district as surgeon of the troops. He had to lead a very unhygienic life, camped out often, frequently not protected against the swarms of mosquitoes for three weeks at a time; exposed himself many a day to the tropical beach. At the beginning he sometimes has ague. Now he appears immune. He is fond of outdoor sport, and has a good deal of it. He weighs more than ever, far over two hundred pounds, leads a very active life, and is considered in all respects a very strong man. Yet he has a Chinese relic, a somewhat enlarged spleen—which, however, never troubles him. Furthermore, I know an old English resident, with over thirty years' hard work in Central America; he passed through severe fevers, even hematemeses. He complains only of the prominence of his splenic tumor. He is working quite hard in his placer mine at present, and is free from all complaint. These cases I cannot consider as splenic cachexia. I believe the term cachexia is only proper with chronic malaria when we have progressive anemia. As I have shown, there can be a large spleen without anemia; the cases may be rare, but they exist.

Excluding cachexia, we notice that some of the cases were alcoholic. These seem to have predisposition to hematemeses, especially after exposure to the sun. Exposure to the sun predisposes in favor of the comatose type. (Bacelli.) It is not uncommon that new-comers, after a spree, come down with fever, as is often the case with sailors who spend only a few days ashore. The abuse of alcohol seems to favor the development of the parasites. If malarial individuals, or those just recovered from a first attack, go on a spree, hematemeses is likely to follow. I know of such cases that were picked up comatose in a pool of blood and were sometimes mistaken for cases of delirium tremens. I have seen such a case, a shipmate in Hongkong. Overheating of new arrivals in a malarial region seems to be favorable for the development of the hemorrhagic type. When I took charge of the garrison of Truxillo, I found in the lazaretto many soldiers suffering from what I considered then to be dysentery. The presence of parasites and the success with anti-malarial treatment proved clearly that I had to deal with malarial hematochezia. Amongst the residents I never met this form. I am told that in a former campaign, when the town was crowded with soldiers, this type was epidemic and many died. The recruits come, as a rule, from the cooler, mountainous interior. Their manner of life was changed at once. Their food was different. At home, as a rule, they did nothing or but little more, their women doing the work. They busied

themselves with their hammocks, except working their fields for a few days in the month and hunting in the shady forests. Now they had to do duty on the hot beaches and in the stony fort without protection against the sun. As a rule, expeditions moved at night, but often also during the day. Such a march along the beach means more than only exposure to the sun. The route is invariably along the seam of the sea, because the sand is moist and hard. At one side high drifts of white sand, that reflect not only heat but also light. At the other side the always rough sea, that also reflects heat and light better than a mirror. The monotonous sound of the breakers tells on the nerves. From above; the tropical sun. The slightest breeze fills mouth, ears, nose and eyes with fine sand. No water, at least no good water, for sometimes ten miles. Thirty miles only are considered a fair day's march. One riding such a distance will feel feverish at night, when he finds only jerked beef and beans or plantains as food and a hammock as a bed, where he can protect himself only partly against the ever-present mosquitoes. How much more will the degenerate ladino suffer, who has to walk and often sleep on the ground, filling his stomach with brackish water and stale fruit. Naturally his first malarial attack will derange the alimentary apparatus and cause the hematochezias just mentioned.

Although the five cases of pernicious malarial hemorrhage I described were the only ones of non-cachectics under my direct observation, they are by no means very rare. In fact, they are taken frequently for yellow fever, because the patients die in relatively short time and often show the icteric hue. I know of a healthy child that was taken to the coast and died within twenty-four hours after the first and only chill, of "vomito-negro." No wonder the natives fear so much the "vomito-negro"—black vomit. Usually only natives succumb, foreigners form the exception; while with yellow fever the foreigners die and the natives form the exception. No more than a few days ago a prominent colleague of this faculty, who just returned from the Pacific coast, told me, when asked about the yellow fever rumors, that he had examined the suspected cases and that they belong to the type just described.

How do the hemorrhages occur? My fifth case, on which I performed autopsy, gave me the key. The blood shows abundance of plasmodia malariae. The pigments increase the coagulability. The brain was studded with many fine hemorrhagic dots. The small size is accounted for by the quickness of coagulation. The enlarged blood corpuscles block the lumen of the capillaries and the thrombosis ensues. All of my cases were comatose; this coma is due to the enlarged capillaries and the consequent pressure. The hematemeses is caused by a similar process in the mucosities of the stomach. The convulsive contractions during the vomiting strains the engorged capillaries and they rupture. This process also accounts for the shape of the coagula. Only when larger vessels rupture have we free hemorrhage. If the individuals are alcoholics, the mucosity is already in a state of congestion and consequently the hemorrhage with them is mostly free. That these cases occur at all is due to the severity of infection.

Bassere (*Archives d'Ophthalmologie*, June, 1896) describes twelve cases of malarial retinal hemorrhages with the Madagascar troops. The hemorrhages occurred suddenly, often at the height of the first attack of fever.

There is no reason to exclude analogous processes in the intestinal tract, and *cachexia is therefore no necessary condition.*

As to the treatment, it must be anti-malarial. Quinin is always indicated in these cases. The more severe the case, the more exact the indication. Not to lose time and not to exhaust the patient by provoking more vomiting, we must resort to hypodermic medication. We are sure then that the necessary quantity of the medicament is introduced into the system. Less than 100 c.c. is hardly sufficient, and the more severe the infection, the larger the dose that can be administered without undue effect. Not until the stomach is absolutely at rest can medication per *orem* be considered proper; but even then never in form of pills or capsules. If only bitter salts on hand, wafers can be used. I prefer to use euquinin, inasmuch as the acid of the stomach probably reduces the quinin-ethyl carbonate to quinin, and therefore the action is the same; cinchonism occurs just as well as with quinin, amurosis may sometimes follow its use; but the bitter taste of quinin is thus obviated. We cannot deny that the bitterness of quinin is often sufficient to cause vomiting. Therefore my principle is to inject the neutral hydrochloride until euquinin can be taken. Stypticin controls the hemorrhages in these cases as well as in those due to tubercular processes.

If the hematemesis been excessive, an injection of the normal salt solution should follow the administration of quinin, not only to prevent collapse, but also to dilute the blood and thus diminish the formation of the capillary thrombi.

LIGATION OF ARTERIES—COCAINE ANESTHESIA.

BY B. MERRILL RICKETTS, Ph. B., M. D., of Cincinnati, Ohio.

A plea is herein offered for a more general use of cocaine for local anesthesia, especially for operations upon the head, neck and extremities. It should not only be more generally applied in these regions, but on occasions demanding it, to parts of the trunk as well.

Its use has become better and more generally understood than any of the local or general anesthetics. It is certainly more efficacious, more desirable, and less dangerous. It has a wide scope of usefulness, while as yet it has been applied to but a limited degree.

Reference is made to its application to operations of any character on the extremities, and especially to its application in those involving the blood vessels. Indeed, there are but a few kinds of surgical operations that have not been done in a very satisfactory way with the local use of cocaine.

Cocaine anesthesia will not only permit of the ligaturing of the more important blood vessels, but celiotomy for various purposes as well. The removal of the various neoplasms, malignant and benign; plastic operations upon nerves, cutaneous, muscular and bony structures in a healthy or pathologic state; removal of foreign bodies, or amputation of any part of the upper or lower extremities, are advised.

Amputation at the shoulder-joint has been successfully accomplished with cocaine as a local anesthetic by Crile; and while there is no recorded case for demonstration, there is no reason why even amputation at the hip-joint should not now be accomplished in this manner.

Since the injection of a solution of cocaine into the nerve trunk or its sheath, or both (known as blocking, was advocated by Matas and Crile), a greater scope of usefulness is available. The blocking method prevents afferent impulses from reaching the central nervous system, and in this way shock is prevented. Crile's theory has shown this to be the cause of shock, and that injury or operation may excite afferent impulses to produce it.

Subcutaneous injection of cocaine was first practiced in 1884 (the year the drug was first placed on the market). Since then much excellent work has been done with it, both subcutaneously and upon mucous membranes.

The effects of the remedy have become better known from experience and careful study, until now there can be no question as to its occupying a most prominent place along with ether and chloroform in surgical work. Cocaine should not be used in all surgical operations or kinds of operations; neither should ether, chloroform, nitrous oxide, or any of their combinations. There are cases that will necessitate the use of an anesthetic that will produce unconsciousness. Just so are there cases which demand nothing more than a local anesthetic. The judgment of the operator must be relied upon in the selection of the anesthetic to be employed.

INDICATIONS.—The use of cocaine for operations is especially indicated in pulmonary, cardiac and renal disease: also in case of exhaustion from any cause.

During unconsciousness emergency work may be accomplished by blocking the nerve trunk. In this way further shock may be prevented and much time saved and subsequent excitement will be much less marked.

Head and Neck.—The nerves supplying the head and neck being so very inaccessible, offer but little opportunity for "blocking." Subcutaneous injections must, therefore, be resorted to. The external soft tissues of these regions may be subjected to operations by such injections without pain. This is also true of operations upon the mucous membranes, when local applications or subcutaneous injections are made separately or combined.

The constitutional effects of a given amount injected in the head, face and neck are more marked than when injected in other parts of the body or extremities. This is due to two causes: more rapid absorption and its proximity to the brain. For this reason less cocaine should be used and the blood vessels avoided.

Laryngotomy, laryngectomy and amputation of the breast can and should be more frequently performed with the subcutaneous use of cocaine. Resection of one or more ribs can be accomplished with ease, and should be resorted to with cocaine in many conditions of the chest requiring surgical intervention.

The removal of blood, pus or serum from the pleural or pericardial cavity should be done in this way. Pulmonary abscess, injuries to lung or heart, are made surgical by its use. It should not be applied to the heart muscle itself, but to the pericardium and overlying tissues to be incised or sutured.

Any operation, whatever, may be made upon the shoulder or arm by injecting the brachial plexus, which is best reached through an incision intended for ligation of the subclavian artery. The artery may, if necessary, be ligated through the same incision which has been made for the subcutaneous injection of cocaine. The amount required for injecting the nerves need not exceed one drachm of a one-half or a one per cent. solution. This was the method employed by Crile in amputating at the shoulder-joint, which was so successfully accomplished with recovery of patient.

For operations about and below the elbow, a consideration of the musculo-cutaneous, median, ulna and musculo-spiral nerves, one or all, must be given, the degree of anesthesia being proportionate with the number of nerves injected and the thoroughness with which it is done. Only a few drops is required for each individual nerve.

Lower Extremity.—The injection of the external cutaneous is done with ease, it being superficial. The anterior crural should also be injected together with the great sciatic.

Blocking of the anterior crural and sciatic nerves will produce sufficient anesthesia to make any operation below the point of puncture painless. This nerve is best reached at the lower and middle border of Poupart's ligament. It is more easily approached than any of the greater nerve trunks of the extremities, and for that reason it is probably best to inject it in all important operations that are to be made upon any part of the leg with cocaine anesthesia.

The sciatic nerve is best injected through an incision in the gluteal fold.

Scrotum.—The ilio-inguinal and genito-crural nerves supply the scrotum and its contents. The first accompanies the spermatic cord through the inguinal ring to supply the integument of the upper thigh and scrotum in the male and the labium in the female. It varies in size—usually small—and connects with the ilio-hypogastric. When it does, a branch of the ilio-hypogastric takes the place of the ilio-inguinal or the latter may be altogether absent. In the second the first branch passes through the internal abdominal ring to accompany the spermatic cord posteriorly to the cremaster muscle in the male and the round ligament in the female. Injection of these nerves may be made in the same incision necessary for doing any surgical operation upon the scrotum or its contents. In this way ninety per cent. of all operations upon the scrotum may be accomplished without pain or danger to life, so far as the anesthetic is concerned.

Aneurism.—Subcutaneous injection alone, in and about the field of operation, is all that is necessary to make ligation of arteries of the extremities painless. However, blocking the nerve trunk is most practical, and no doubt should be done as a rule. There is more or less pain in tightening the ligature about the artery in subcutaneous injections unless the sheath of the artery be also injected. The use of local anesthesia is especially desirable in aneurism in the extremities.

Method.—A one-half to one and one-half per cent. solution of the best cocaine should be secured and the operator should know how to use it. An amount of solution containing from one-half to one and one-half grains of cocaine need not be exceeded in performing any operation. Subcutaneous injections alone for operations will require more of the drug than where the injections are confined to the nerve trunks. The amount of cocaine necessary for the incision to reach the nerve trunk is but a trifle more than the amount necessary for injecting one or more nerves. If subcutaneous injections alone be resorted to for operations involving more than the cutaneous structures, besides making deep primary injections, it will be necessary now and then to inject sensitive fasciæ or muscle or both.

It is necessary in all cases where the bone is involved, necessitating attack, to inject the periosteum directly, that its sensibility may be overcome; in this way the periosteum may be divided and retracted without pain or discomfort.

Subcutaneous injections alone are not so desirable for operations upon bony

structures as "blocking," especially in prolonged operations; such injections in the fingers and toes will make them anesthetic and permit of the bone being divided without pain.

Celiotomy may be made with the subcutaneous use of cocaine. In such cases it is well to inject the peritoneum also just before dividing it.

Advantages.—The danger of the drug is nothing if properly used, and it can be thus applied (a thing that cannot be said of ether, chloroform, nit. oxide, or any of their combinations). Nausea, vomiting, cephalalgia, nephritis, bronchitis, pneumonia and shock are absolutely avoided.

Crile says that injections into a nerve will not produce degeneration anywhere in its course, but that a needle puncture in the spinal cord will do so. This together with a very high death-rate and uncertainty of anesthesia should be sufficient to condemn spinal anesthesia. It would be just as rational to inject it into the cerebral arachnoid cavity.

CLINICAL REPORTS.

A UNIQUE CASE OF HEREDITARY LUES.*

By MARTIN F. ENGMAN, M. D., of St. Louis, Missouri.

Mrs. X., age twenty-six. Is a fairly well-developed woman. Her mother has three other children living, all of them seemingly well. One child died in infancy. Mother is in good health, and denies all knowledge of any eruptive or luetic condition whatever. The patient was always a very delicate child. As an infant there was never noticed any eruption or symptoms suggestive of the present trouble. At the age of eight an ulcer appeared upon the front of each leg, these were cured by treatment. Subsequently a similar condition appeared



FIG. I.—Showing extent of ulcer upon lip and angle of mouth.

just above the left elbow. The patient has always had trouble with her throat. Three and a half years ago she had an attack of diphtheria, which has left her almost voiceless; she can hardly speak above a whisper.

One year ago she had a troublesome tooth drawn, when the dentist, she thinks, injured the gum and lip in the operation. However, there soon appeared a sore spot upon the gum which spread to the lip and caused the present condition for which she consulted us. During the year which this ulcer has existed it has been once or twice partially healed under internal and local treatment.

On account of the hoarseness the clinic clerk at first referred the case to the throat department; from there she was kindly sent to us. The throat could not be thoroughly examined on account of the ulcer upon the lips, which prevented them being sufficiently opened, but with a carefully reflected light several scars and small ulcers could be seen upon the soft palate, and the uvula secured by adhesions to the posterior wall of the pharynx. The vocal cords could not be examined.

* From Dr. W. A. Hardaway's service at the Polyclinic, Medical Department Washington University.

The ulcer occupied the left angle of the mouth, slightly invading the upper lip, while it extended almost to the middle line of the lower, deeply invading all the tissues of the lips and for an inch and a half beyond the angle into the cheek. (See Fig. I.) It was covered by a thick, greenish-black crust which exposed upon removal a fungous, foul, discharging bottom. The edges were abruptly circumscribed and indurated, a distinct characteristic of specific ulcers of this type. There was little pain, even upon pressure or manipulation. Upon the front of each leg was a white, glistening, smooth and oval-shaped scar.



FIG. II.—Showing saber-shaped tibiae.

having all the characteristics of a former luetic ulceration; a similar scar was upon the left arm just above the elbow.

From the history of the case it was decided that the infection was most probably an hereditary one, which was partially confirmed by the shape of the tibiae, they being the typical saber-shaped tibiae, most often significant of lues. (See Fig. II.) As Dr. Hardaway wittily said, when he saw the case, "*La sabre de mon pere.*"

The points of interest in this case are several. The position of the ulceration upon the lip. Never before have I seen the report of such a destructive luetic infiltration in this locality. Cracks and small patches are common here in the early cases, but not deep lesions. Such a lesion coming so late would remind one of the tardy hereditary syphilis of the French, had we not the evidence in the tibiae and scars of a former ulceration.

Another interesting feature is the perfect freedom of the teeth, eyes, ears and head from any evidence of taint. There has never been any trouble with the eyes, the hearing is perfect and the teeth are beautiful and regular. The nose is straight, and the head of a normal shape. The patient is normally developed; the busts are of fair size, and the menstrual and sexual functions normal.

That trauma has had something to do with the development of the lesion on the lip is probable. The ulceration about the tooth or the injury produced in drawing it was probably sufficient to start into activity syphilitic cells or organisms lying dormant in that position; thus producing the gumma. In all forms of latent syphilis, trauma, either mechanical or chemical, is often an important exciting factor.

The result of specific treatment proved the diagnosis. She first appeared at the clinic February 4, 1902, and upon the fourth of March the ulcer was entirely healed. In this connection it is interesting to note the more rapid effect of the combination of tonics with the specifics, so warmly advocated by Dr. Hardaway* and others, which was used in this case. Her general condition is wonderfully improved.

I am greatly indebted to Dr. H. P. Wells for the excellent photographs accompanying this report.

FUNCTIONAL SYMPTOMS IN ORGANIC DISEASES, ILLUSTRATED BY THE PRESENCE OF A BILATERAL ABDUCENS PARALYSIS IN A CASE OF TYPHOID FEVER.

By SIDNEY I. SCHWAB, M. D., of St. Louis, Missouri.

The following case is of interest, both on account of its rarity and on account of the diagnostic problem which it presents. Functional symptoms as a complication of organic diseases are becoming more and more the subject of study, and the time is long past when the presence of an organic condition casts doubt upon the purely functional character of a lesion which is seemingly anatomic in nature.

The reasoning that every nervous symptom occurring in a case of typhoid fever, for example, is due directly to the typhoid fever, is faulty for at least two reasons: first, such a symptom may have existed before the onset of the fever or may have been masked by it; second, any nervous symptom which is anatomically impossible of explanation is not made more possible by ascribing to its causation the general constitutional disease which is present. Every nervous symptom occurring in the course of an organic disease should be studied first as an isolated symptom, and then, after an attempt has been made to place it in relation with the general condition present, and this is unsuccessful, there is sufficient ground to regard the symptom as functional in origin. By functional in this connection is not meant necessarily hysterical but rather psychical. The use of distinction is evident when it is considered that a diagnosis of a hysterical symptom probably connotes a diagnosis of hysteria, and the latter ought never be made when only one evidence of its presence can be found. It must be freely admitted that there exists in what may be termed health a great many symptoms which are purely of psychical origin, and that in the presence of a definite organic disease such symptoms may continue to exist without any further anatomic basis for their appearance.

* *Medical Bulletin of Washington University*, January, 1902, page 4.

I am indebted for the following case to Dr. F. Taussig, formerly assistant superintendent of the Female Hospital, who kindly allowed me to study it in the wards of that hospital. The clinical history is very briefly as follows: Belle F., colored, aged sixteen years, was admitted to the hospital on September 25, 1900. Family and personal history negative; no venereal disease. Two weeks before, during a quarrel, she was struck in the back of the head with a brick; was unconscious several hours; the wound, a slight scalp one, was dressed and healed nicely. While bending over a tub at her home some ten days later, she felt a sudden pain in her eyes and back of the neck; she fell but remained perfectly conscious. Then followed a period of malaise and she entered the hospital. At the time of entrance her temperature chart showed a typhoid curve characteristic of the defervescence period, with a nocturnal rise of a degree or so. The evening temperature was seldom above 101°. A diagnosis of typhoid fever was made upon a positive Widal reaction together with the usual physical signs. The urine was practically normal. At the time of her entrance the eyes were the chief point of interest. There existed a complete paralysis of both external recti muscles, while the other ocular muscles, both internal and external, were perfectly normal. No movement of either eyeball outward could be obtained. Both eyes looked slightly inward. This condition continued as long as the patient was under observation. There existed then a paralysis seemingly complete of both external recti muscles, a double-sided abducens paralysis. An examination of the patient's nervous system was carefully made for the purpose of discovering any traces of hysteria; none were found. A slight linear scar in the occipital region was all that remained of the wound previously alluded to. An examination of the eyes was made by Dr. Charles on several occasions and showed, beyond the muscular symptoms before noted and a slight astigmatism, nothing abnormal.

In attempting to explain this symptom the following possibilities were considered: (1) Typhoidal neuritis of the sixth nerve; (2) Nuclear disease of both abducens due to a typhoidal encephalitis; (3) Hysterical paralysis; (4) Functional paralysis. Neuritic paralysis of the sixth nerve is not uncommon, but it is always in conjunction with a paralysis of the other ocular nerves. Unilateral paralysis of the abducens is by no means rare, but no example of an isolated bilateral paralysis of neuritic origin was found in a careful examination of the literature; nor is such a possibility even mentioned in Remak's and Flatow's "Neuritis and Polyneuritis," the latest text-book on the subject. The same objection applies to the second hypothesis. It is almost impossible to imagine that both nuclei of the sixth should be the seat of any inflammatory or traumatic process without involving some of the other nuclei which are so adjacent to it. A diagnosis of hysteria is not justifiable, for the reason that beyond this one possible symptom there was nothing that would suggest this diagnosis at all. There remains then the diagnosis, by exclusion, of a functional symptom. It is to be noted that this functional paralysis existed independently of the typhoid, and in all probability dated from the head trauma and the psychical disturbance which was then produced. This case then justifies the following conclusions: 1. Nervous symptoms may exist in the presence of an organic disease which bear no direct relation to it. 2. Such symptoms may have an origin which antedate the appearance of a constitutional affection. 3. Symptoms of an obviously inorganic origin should not be diagnosed as hysterical unless the diagnosis of hysteria is justified. 4. In the present state of our knowledge the term functional may be given to such symptoms, meaning thereby chiefly that their origin is psychical.

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JULIUS NEUMANN, M. D.,
Docent of Obstetrics and Gynecology, University of Vienna, Austria.

JULIUS SCHNITZLER, M. D.,
Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,
Berlin, Germany.

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EDITORIAL COMMENT.

SIDE-SADDLE VERSUS MAN'S SADDLE.

For some time there has been noticed a tendency to reform in manner of the position women sit when riding horseback. This agitation is international, and especially seems to have taken root in America, England and Germany. The question whether the new method of riding a horse straddle-fashion is superior to the old way—side-saddle—must be considered from the three standpoints of sport, esthetics and hygiene. Besides the comments that have been frequently published in newspapers and in journals devoted to outdoor sports, there has recently appeared in a medical journal a series of interesting articles bearing upon this subject. The writer of the first of these articles (*Deutsche Medizinische Wochenschrift*, 1901, No. 46), herself a woman, is decidedly in favor of retaining the side-saddle. She admits that the use of a man's saddle bestows upon the rider a more perfect control of the horse, but considers it superfluous because the majority of ladies prefer riding well-trained horses and do not take up horsemanship as a "science." On the other hand, the minority who look upon riding seriously, and are passionately attached to the sport, achieve even by the use of a lady's saddle remarkable success and suffer in no way by comparison with male riders. From an esthetic point of view, the writer claims, a woman who straddles looks undoubtedly ungraceful, and her costume is only appropriate on horseback.

As a street costume, the bifurcated skirt is diametrically opposed to good taste, and in trousers a lady would always be subjected to great embarrassment. As regards the sanitary side of the question there are great objections, according to the writer, to the man's saddle for women; the external as well as the internal genital organs are liable to injury.

These views of the writer are stoutly opposed in the two articles that follow in the series (*Deutsche Medizinische Wochenschrift*. 1901, No. 49, and 1902, No. 3), one of which is written by a physician and the other by a woman who is a leader in the woman's rights movement in Germany.

While we do not feel competent to discuss this question as it appears in the light of a sport, or as a matter of esthetics, we are justified to review the facts from a medical standpoint. This is of importance because quite often we are asked by ladies who themselves ride or whose daughters wish to ride, which position is the more sanitary. Sitting astride a horse, a position which causes the legs to be separated at an angle between sixty to seventy degrees, is not natural for a woman. There can be no doubt that the external genital organs, on account of friction and pressure, suffer from mechanical irritations which, when of long duration and frequently repeated, may give rise to deep-seated and stubborn inflammations of the mucous membranes. The advocates of the new method of riding claim that the similar position on the bicycle does not cause disturbances of this kind. But there is a marked difference between riding a wheel and a horse. While on the former the rider is securely seated in the saddle and it is only the saddle that moves on its springs, on the latter, just because the saddle is stationary, the equestrienne is joggled by each movement of the horse. This constant friction must necessarily result in an irritation of the numerous sensory nerve-endings of the external genitalia and may induce masturbation. In married women who have borne children, and in whom the internal ligaments are relaxed, the harm done may be even greater. With every jolt the uterus is thrown downward in the direction of the pelvic outlet, a factor which certainly will propagate the formation of a prolapse of uterus and vagina, especially if the pelvic floor is not intact. An additional factor is given in the increase of the intra-abdominal pressure in horseback riding, proved by the well-known experience that hernias are very often found in cavalrymen.

These disadvantages are, in our judgment, considerably lessened when the side-saddle is used. Here the friction of the external genital organs are against opposite surfaces and not against the hard saddle, and even then is sometimes intense enough to bring forth sexual desire, as has been stated by intelligent women. The fact that the pelvis is turned to the side has the further great advantage that the pressure from above is not directed on the pelvic outlet, consequently does not directly produce a descensus of vagina and uterus. The brunt of the pressure is borne by the non-elastic sides of the vagina, and especially by the unyielding bones, so that here there is sufficient counter-pressure.

From the above we arrive at the conclusion that from a medical standpoint the customary manner of riding in the side-saddle for women is the better, and that the grand total of injuries can be greatly reduced by frequently changing the position from one side to the other.

USE OF THE ST. LOUIS MEDICAL LIBRARY BY PHYSICIANS OUTSIDE THE CITY.

The idea has recently been suggested by one of those who are working hardest for the medical library, of the medical men in the vicinity of this city being afforded the facilities which that institution offers. The proposition is certainly a good one, and deserves serious consideration. To those in the immediate suburbs the library should mean much, since they are within comparatively easy reach of it, and regular visits to it would be in themselves a stimulus to the more scientific sort of work which is usually done only by those who are nearer the centers of population. The use of the library would also be of distinct value to the physician residing in a Missouri or Illinois county farther from St. Louis. For he is certainly not able in the seclusion of his own private library to work up the literature of any subject in which he may be interested; hence would be repaid for a visit to the city by the material to be found on the shelves of the library. At the same time his outlay for the trip would be more than repaid by the saving in price of books and journals, which he must otherwise purchase.

The library would at the same time profit by the increased revenue accruing from the membership fees of the men from out of town; hence, in our own selfish interest it behooves us as members to work for an object which cannot fail to improve the institution, and so increase the facilities afforded us for study and self-improvement. The various circulating lay libraries have their clientele scattered all over the counties adjacent to the point of distribution; why cannot the medical library be made just as wide in its usefulness?

TETANUS AND VACCINATION.

The recent epidemic of tetanus at Camden, New Jersey, created widespread interest in the question of this infection complicating vaccination. In that epidemic, investigation clearly showed the vaccine points used were not the carriers of the infection. Cases of tetanus have not infrequently occurred sporadically in connection with vaccination, so that medical men have a keen interest in the subject. Here in St. Louis a fatal case of tetanus occurred a few weeks ago. The tetanic symptoms began three weeks after the vaccination. The incubation period of tetanus rarely exceeds ten days, so it appears that this was a secondary infection in the wound, and not due to a vaccine point.

These and other similar experiences in various parts of the country should make the physician more and more watchful in the after-care of the vaccination wound, which, of course, is made under strict application of the laws of antisepsis and asepsis. The vaccination wound should receive the same care given other surgical wounds. The surface should be covered with a surgical gauze dressing, and not exposed to infection from shields, clothing and other sources. In this way tetanus can be excluded except through the vaccine point. We look to the manufacturer for protection against vaccine point contaminations, and the thoroughly scientific method of preparation of biologic products on the part of the various commercial firms engaged in virus manufacture certainly seems to insure against accident.

In this connection the symposium of vaccination, vaccine virus, etc., read before the New York Academy of Medicine, February 20, 1902, is of interest.

Dr. John H. Huddleston stated that tetanus has occurred indiscriminately both following the use of dry points and glycerinized virus. The most careful investigation of a large series of cases shows that no case of tetanus ever developed at a time when, according to the usual incubative period of tetanus, it would seem probable that both tetanus and vaccinia could be inoculated together.

STREET CARS AS DISTRIBUTORS OF DISEASE.

In the larger cities of this country the street car is as potent a factor in the dissemination of communicable diseases as many of those usually catalogued in the standard works of hygiene. In these larger centers of population the condition is one of an excessive number of passengers crowded into a limited number of cars. In some cities this continues throughout the entire day, and in all of them during the morning and evening hours. During the period of congested traffic the cars are crowded to the limit, every seat being occupied, and the aisles and rear platforms literally packed with all classes of our variegated population.

The ventilation of these cars is inferior, both on account of the inattention to this important matter on the part of the builders of this class of rolling stock, and also because the passengers differ so widely as to the proper temperature and circulation of air necessary to their comfort.

Tuberculosis is undoubtedly spread through the medium of these cars, which become infected by the promiscuous expectoration indulged in by consumptives notwithstanding notices of warning. Hannum, of Cleveland, recently examined twenty-five specimens of sputum found in street cars (fifteen from the interiors and ten from the rear platforms): the tubercule bacillus was present in three instances. Other specimens showed the pneumococcus and the bacillus influenzae.

These conditions, the person-to-person contact, and the breathing of vitiated air frequently laden with contagious exhalations and with dust from dried sputum, are most favorable to the distribution of contagious diseases. Of course, it is only problematical as to the number of small-pox cases which were infected through these conditions during the recent epidemic, but it is certain that but few better opportunities of infection are offered than through the street car contact of all classes. Other transmissible diseases can be communicated in the same way.

The solution of this problem is not easy. It will require strenuous efforts on the part of health officials to bring about a better condition. Street railway companies are not inclined to relieve the present situation without compulsion. Health officers, however, have authority over the sanitation of these public conveyances. This authority in most municipalities gives sufficient power to prevent undue overcrowding of cars when such prevention would be for the protection of public health. When necessary, as in times of a general epidemic, such authority should be exercised. Under all circumstances regular disinfection of street cars should be practiced in an efficient manner. In this way the cars can be made biologically clean, and the health of the community better protected. There is just as much occasion for this procedure as there is for the disinfection of Pullman cars now energetically practiced at different points. Investigation has developed the fact that there is but one city in the country, Philadelphia, where any pretense is made of disinfection of street cars. The Union Traction

Company of that city disinfects its cars with carbolic acid. This possibly answers for the killing of bacterial life on the floors and walls of the cars, but does no good for the contaminated places where dust has settled, and which nothing but a gaseous agent would reach.

THE GERMAN EMPEROR AND CHRISTIAN SCIENCE.

The entire medical profession and such of the laity as take an interest in the defeat of mysticism and fraud are gratified by a recent announcement of the Emperor of Germany. According to the *Muenchener Mediz. Woch.*, he declared "health praying" to be a fraud unworthy of our century and the city of Berlin, and announced that individuals identifying themselves with the doings of spiritists, faith curers and similar deceivers should not be allowed to appear at court. It is expected that this attitude will have a far-reaching effect against the obscure and dangerous teachings of Christian Science.

The Emperor's announcement may appear to the hysterical followers of these fraudulent teachings in our own country as another attempt to exclude American products.

THE AMERICAN ASSOCIATION OF PATHOLOGISTS AND BACTERIOLOGISTS.

The American Association of Pathologists and Bacteriologists held the second annual meeting in Cleveland, March 28th and 29th. Although the association is young in point of age, its work thus far has been most creditable, and effectually dispels the erroneous idea prevailing in some quarters that there is little original work being done in this country along research lines in bacteriology and pathology. The work of the association for the past year has been partially published in the *Journal of Medical Research*, and its excellence has been already noted in these columns. The work presented at this second meeting is, indeed, a favorable sign that America is striving for a place among the scientific nations. We have in this country quite a number of excellent pathologists and bacteriologists. That they accomplish as much as they do is really remarkable, when we consider how little encouragement there is offered in America for scientific work. We have here no governmental chaperonage, as there is in Continental countries. There are but few places where pathologists are sufficiently remunerated for their teaching services, for instance, and there are still fewer places where opportunities for original research are at hand. In spite of these handicaps, American pathologists and bacteriologists are producing works of science that will live.

There were a number of creditable papers read at the meeting. Councilman's paper on the "Pathology of Small-pox" was interesting and instructive, representing, as it did, results obtained from fifty autopsies made during the recent epidemic in Boston. The principal finding noted by Councilman in these cases was the reduction of the polymorphonuclear leucocytes in small-pox; he also noted the constancy and severity of the secondary streptococcus invasion, and the necrosis of the testicle and bone marrow. There was also a demonstration of the gross lesions of small-pox made by Magrath and Brinckenhoff of Boston.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

Investigations of Pleuritic Fluids.—WOLFF, Berlin (*Berliner Klinische Wochenschrift*, February 10, 1902).—Pleuritic exudates have certain morphologic characters, which make it possible to draw conclusions with reference to etiology.

The prevalence of lymphocytes in the exudate (one-half or more) speaks for the tubercular character of same.

The tubercular fluids present at first a polynuclear character. They are frequently not sterile, but contain, as do other pleuritic fluids, peculiar rod-like bacteria that cannot be grown in cultures. Gradually the lymphocytes occupy the foreground. In doubtful cases a puncture should be made every eight days, in order to determine the morphologic picture.

It is usually easy to recognize a lymphocyte, but sometimes a number of methods must be brought into service. It is possible to mistake them for degenerative stages of polynuclear cells. The epithelial cells also undergo peculiar changes, which cause them to resemble the large mononuclear cells of Ehrlich. The exudates due to acute processes are differentiated from the tubercular through the character of their morphologic products.

Bleeding—A Critical Historical Essay Concerning the Development of the Question During the Last Decade.—STRUBELL, Vienna (*Centralblatt fuer die Grenzgebiete der Medizin und Chirurgie*, Nos. 1, 2, 3, 4, 5, 1902), gives a most comprehensive review of the literature on bleeding, together with the references. After taking up the discussion of the subject in a general way, it is considered with reference to its special indications. Bleedings in chlorosis, poisons, eclampsia, uremia, pneumonia, circulatory disturbances, and in children, are all comprehensively dealt with. The thoroughness of the work is evinced by the collection together of one hundred and seventy literature references, each of which is taken up in turn and critically dealt with.

An Artificial Esophagus.—SPIEGEL, Vienna (*Berliner Klinische Wochenschrift*, February 3, 1902), reasoning that the esophagus is purely a tube of transmission from the mouth to the stomach, and has nothing to do with digestion, maintains that it is possible to supply a tube which will take the place of the esophagus when obliterated or strictured. This he would accomplish by introducing a tube into the upper part of the esophagus, just above the clavicle, and connecting it with a gastric fistula. The tube passes over the sternum and can be removed when desired. A special device is arranged for imitating the peristaltic action of deglutition. Aside from the importance of oral stimulation for the gastric secretions, the artificial esophagus has a pronounced psychic influence upon the patient, enabling him to taste and swallow his food.

Thyroiditis Complicating Typhoid Fever.—ROBERTSON (*Pennsylvania Med. Jour.*, January, 1902) reviews the literature, and points out the great rarity of thyroiditis excepting in localities where goitre is endemic.

The author's case occurred in a man forty-two years of age, so far advanced in convalescence as to have reached a normal temperature. He began to complain of difficulty in swallowing. The thyroid became enlarged, especially the

right lobe. It was quite tender on palpation, giving a sense of semi-fluctuation. He had a slight chill, the temperature rose, there was dysphagia and a feeling of constriction about the throat. After a troublesome period of ten days the process terminated in resolution.

The Detection of Typhoid Bacilli in the Feces as a Diagnostic Test of Typhoid Fever, and a Comparison of this Test with the Widal Reaction.—HIGBY (*Medical News*, No. 13, 1902) attributes the unsatisfactory results obtained by many in the employment of the Widal reaction to faulty technic. He makes a comparative summary of the results attained in twenty-one cases in which both the Widal reaction and the isolation method of Hiss were used. The typhoid bacilli were isolated from the feces in twenty of these, while the Widal was positive in but eighteen. The average day on which isolation of the bacilli was possible in eighteen cases was the tenth, while in fifteen cases in which the Widal was positive, the average day of its first appearance was the twelfth. Both of these procedures, when used in combination, make possible the establishment of a diagnosis of typhoid fever in many instances before this could be accomplished by purely clinical observations. In only three of these cases did the appearance of the roseola render the diagnosis positive before it had been established by one of these methods.

By the use of the Hiss isolation method, especially with the substitution of the new plating medium, the detection and isolation of typhoid bacilli are, to one familiar with bacteriological methods, simple, reliable, and practical.

Isolation of Bacillus Typhosus from Unusual Localizations—Cholecystitis, Meningitis and a Five-Months' Fetus.—MCDANIEL (*Journal American Medical Ass'n*, February 15, 1902) reports three cases of typhoid fever in which the typhoid bacillus was isolated from unusual localizations.

The first patient developed a severe pain in the right hypochondrium on the eighth day. This gradually increased in severity and became intermittent in character. On the twelfth day a tumor, four to five inches in diameter, developed just below the liver. Blood count showed 18,500 leucocytes. On the seventeenth day cholecystotomy was performed. The gall bladder was distended with a mucoid fluid which contained bacilli identical with typhoid bacilli.

The second case was one in which the patient, while convalescent, developed meningitis and died. The autopsy showed an extensive purulent inflammation of the cerebral meninges. A bacteriologic examination showed this to be a meningitis due to unmixed infection with the bacillus typhosus.

In the third case the mother aborted one week after the beginning of convalescence of typhoid fever. The Widal reaction was positive in the blood of both mother and fetus. From the spleen, liver and peritoneal fluid was isolated an organism which presented all the characteristics of the bacillus typhosus with the exception that it formed gas in media containing dextrose. Three other organisms were found differing in other particulars from the typhoid bacillus. The author suggests that the first bacillus is the typhoid bacillus which has undergone some modification in the fetus whereby ability to produce gas from dextrose was acquired.

Remarks Upon Some Experiences with the Widal Reaction.—LIBMAN (*Medical News*, March 29, 1902) concludes from his observations of the Widal reaction that a positive reaction always means that typhoid fever is or has been present. Partial reactions are to be entirely ignored. A negative reaction does not exclude the existence of typhoid. The reaction may have disappeared; it may appear later; the culture may be at fault, or it may be one of those cases of typhoid in which the reaction does not appear.

The Widal reaction is of the greatest value in establishing the diagnosis in atypical cases.

Adrenal Substance in the Intestinal Hemorrhage of Typhoid Fever.—COLEMAN (*Medical News*, March 29, 1902), prompted by the splendid results given by adrenalin in controlling various forms of hemorrhage, administered it in five cases of typhoid fever.

Four of these cases recovered, and one died. The hemorrhage in two of the cases especially was quite severe. Fifteen-grain doses were administered three times daily. The author recommends that five-grain powders be kept constantly on hand in cases of typhoid fever, and that the nurse be instructed to administer them upon the first appearance of blood in the stools.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Extensive Symmetrical Spontaneous Gangrene of the Lower Extremities.—DE ROUVILLE and SOUBEYRAN (*Archives Provinciales de Chirurgie*, January 1, 1902).—Such cases are certainly not common, especially those on which the double amputation is done and withstood. The patient in question, a man of thirty-eight, was taken ill with vomiting, and on the next day noticed a peculiar involvement of his legs. After severe cramps for a time they grew very white and cold, after which he lost sensation in both. Two days later there appeared greenish spots, which gradually deepened in color and became more extensive until the fifth day, on which he entered the ward. Arterial pulsation could not be felt, while there was still some venous return; sensation had been entirely lost in the affected areas, and there was absence of voluntary motion. The condition deepened into one of complete gangrene, so that at the end of one month one member was amputated, and at the expiration of three weeks more the other as well. The patient up to this time had fever, rapid pulse, and manifested in various ways a decided intoxication. The disease had for its basis arteriosclerosis, as was proven by the examination of the vessels in the amputated portions. The authors report from the literature sixteen similar cases. In conclusion, it is urged that separate amputation of the two extremities is usually best, and that where possible to wait, this is to be done secondarily in healthy tissue.

Subcutaneous Intraperitoneal Injury of the Kidney.—DE QUERVAIN (*Deutsche Zeitschrift fuer Chirurgie*, Bd. 62, Hft. 2 und 3).—The histories of two of the writer's own cases are related, and he quotes a large number of interesting facts from the literature of the subject. The first case was that of a boy eight years of age who had been run over and rolled along by a very heavy sled. There was no blood in the urine, and the absence of any distinctively pathognomonic symptoms made a definite diagnosis a very hard matter. At the operation blood was found in the peritoneal cavity, and this membrane, as well as the fat beneath it, was torn down to the substance of the right kidney. Still there was no urine in the cavity, and after a pack the child made a perfect recovery.

In the second case a boy of fourteen was run over by a horse going at full speed. In a short time blood in large quantities appeared in the urine, but there were no peritoneal symptoms, though an extensive dull area appeared in the region of the right kidney and up toward the axilla. In this instance no operation was performed, and the patient eventually made a good recovery. The prognosis of intraperitoneal rupture of the kidney is very bad, as far as one can learn from the various authorities; still the animal experiments made by our author do not go to substantiate the truth of this

A Case of Severe and Threatening Hematuria from a Movable Kidney.—CABOT (*Boston Medical and Surgical Journal*, March 6, 1902).—The explanation for this rare phenomenon as given by the author is that the kidney, hanging from its attachments, was greatly congested, so the bleeding. This theoretical deduction was further proven by a practical observation. The patient was placed in bed with the foot elevated and after a short time the bleeding almost ceased, to begin again as soon as the upright position was resumed. Finally an operation was performed, the organ being sutured in place, and since that time the patient has experienced no further trouble.

The Diagnosis of Tuberculosis of the Peritoneum in Children.—KISSEL (*Archiv. fuer Klinische Chirurgie*, Langenbeck's, Bd. 65, Hft. 2).—In many cases the diagnosis may be difficult, though in early stages, even when a fold of the abdominal wall is grasped, the peritoneum can be ascertained to be thickened, rough and sensitive. The author gives a record of fifty-four cases with thirty-five laparotomies performed. Out of eighteen cases which came to autopsy twelve were found to be suffering from a similar affection of the lungs or pleura, or of both together. The discovery of pleural tuberculosis by aspiration is of value in the diagnosis of a case of suspected peritoneal disease of like origin. Peritoneal tuberculosis may be difficult to differentiate from suppurative peritonitis, appendicitis, chronic intestinal obstruction or sometimes from the ascites which complicates cirrhosis of cardiac origin. Of the author's thirty-five patients subjected to laparotomy twenty-seven were completely cured. (That is seventy-seven per cent., or decidedly better than the sixty-five per cent. of Koenig or the seventy per cent. of other writers of more recent date.—Reviewer.) It may be said that almost every spontaneous peritonitis is of tuberculous origin; further, the disease seldom has a stormy onset.

The Treatment of Acute General Peritonitis.—SMITH (*American Medicine*, March 1, 1902).—The chief feature of the author's practice is the flushing of the cavity with normal (he probably means physiological) saline solution. This he introduces at a temperature of 100 degrees, and leaves as much behind as the abdomen will contain without tension. His patients have, most of them, left the table with better temperature, pulse and respiration than when they went on. He drains after operation with tubes and gauze wicks. Out of twelve such cases he has lost but four, certainly a fine record; and it is to call attention to this fact that the abstract appears, and not because there is anything original in the author's methods. Smith counsels operation even in cases which may at first appear to be hopeless, saying that success may often exceed the surgeon's anticipations.

The Position of the Patient in Operations About the Head and Neck.—MORESTIN (*Gazette des Hopitaux*, February 20, 1902).—The author first mentions favorably the position of Rose (hanging head), and then goes on to remark that a disagreeable and dangerous offset to its advantages is that the hemorrhage is always more than if the head were on a level with the body or higher than the same. Where the head is elevated and turned to the side a double advantage is gained; gravitation favors hemostasis, and at the same time the great vessels in the neck are partly compressed by the twisted muscles. So bleeding is lessened, and at the same time the triangles of the neck can be much more easily mapped out than in any other position. Morestin has devised a table which favors the use of the position mentioned. The article is illustrated to bring out the point.

The Operative Treatment of Gangrene of the Lung.—LENHARTZ (*Mittheilungen aus den Grenzboten der Medizin und Chirurgie*, Bd. 9, Hft. 3).—The author has done twenty-three operations of this kind; eleven of the number of patients were

cured while twelve died. In such cases a rapid improvement is to be expected, else all is lost; especially noteworthy was the sudden and permanent improvement in the odor emanating from those on whom the author operated. Post-mortem examination of those who were cured by operation (and died from other causes later) showed that no trace could be found of the large defect which had been produced in the lung in consequence of disease and operation. As regards the diagnosis, Lehnartz says the surgeon must determine the size, shape, location and number of the foci on which he is to operate. No definite rule can be laid down as to the treatment of the pleura in all cases; in some a primary operation is better, while in others a secondary procedure is to be preferred. In gangrene, the pleura is less frequently affected than one might expect.

The Treatment of Malignant Growths by the X-Ray.—MORTON (*Medical Record*, March 8, 1902.)—The author relates the histories of several cases which are interesting to say the least. The first was that of a patient whose arm had been amputated for a small celled sarcoma at the elbow, the growth having recurred higher up. Great improvement followed the treatment with X-rays, and the patient continues to do well up to date. A like result followed the application of this therapeutic agent to four cases of wide-spread and inoperable cancers of the breast; the condition of these patients having been pitiable in the extreme. Pain disappeared in a stomach case immediately after the first treatment, and improvement in other directions has been marked. Disappearance of the original lesions and softening of diseased lymphatic nodes occurred when this treatment was applied to an epithelioma of the face. In all of these cases relief from pain has been a constant and early manifestation; this is supposed by the author to be due to what he calls benumbing the nerves. Protoplasmic activity, especially in the new cells, is likewise benumbed as he says. The depth at which a growth lies has of course much to do with the matter, because a more intense light can be thrown on a tumor which lies exposed, where healthy covering tissues do not have to be protected.

Stab-Wound of the Pancreas Healed by Deep Suture.—KUETTNER (*Beitraege zur Klinische Chirurgie*, Bd. 32, Hft. 1).—This case is the only one on record like it; one other having been treated in like manner for gunshot wound, however. Fifteen minutes after the man was stabbed he was laid on the operating table, when it was seen that he was bleeding profusely from a large abdominal wound as well as vomiting. There was a prolapse of stomach, large and small intestine, and from the former the contents poured through a large opening, soiling the entire field. The ligamentum hepatogastricum had been split, and through the rent it was seen that the pancreas had been almost cut in two. Profuse bleeding from the latter was arrested by the insertion of three cat-gut ligatures through the parenchyma, and the adjacent spaces were packed. The stomach wound, 9 cm. in length, was sutured as was part of that in the abdominal wall; this latter being fourteen cm. long. On the twelfth day the patient had a chill, and then high fever, still he was up on the eighteenth day and resumed his customary work on the expiration of the tenth week. The author remarks that it is impossible to wound the pancreas alone, on account of its position and relation to other objects. It is not definitely determined what the effect of pancreas juice is upon the peritoneum; still the fact remains that most cases die in which this viscus has been cut open.

A Case of Ascites Due to Cardiac Cirrhosis, Treated by Transplanting the Omentum Between the Peritoneum and Abdominal Wall.—ROE and SPENCER (*Philadelphia Medical Journal*, March 1, 1902).—Before the operation this woman could not come down stairs, but after the same she was able to do her housework. She went on in pretty good condition for six months before she again

reached the state in which the operation had found her. Eight months after the procedure she died and there were found to be fibrous adhesions between the abdominal wall and the stomach, small intestine and omentum; in each of these there were large veins. So the operation had brought about a condition, anatomically speaking, which favored the object sought; at the same time it had prolonged the patient's life about six months.

Inguino-Interstitial Hernia and its Radical Cure.—BERGER (*Revue de Chirurgie*, January, 1902).—In these cases there are two objects to be attained: (a) the disposition of the testicle; (b) the cure of the hernia. The anatomical condition which makes such an anomaly possible is the absence of the external inguinal ring, and in such cases the testicle is of course incompletely descended. Berger reports fourteen such instances, of which eight are in women; in only one such did he, however, have an opportunity to perform the operation which he has designed to permanently repair the abdominal wall. The sack has in these individuals a peculiar and characteristic contour; first, it follows down the course of the inguinal canal for a certain distance, and then gives off a prolongation which runs upward and outward, in many instances as far as the anterior superior spinous process of the ilium. It has usually been claimed that the sack lies immediately beneath the aponeurosis of the external oblique, but the author advances substantial proofs of the fact that he has often seen it between the transversalis and internal oblique muscles. The article next takes up at great length all the various anatomical peculiarities which the condition may show, not forgetting to mention the effect of muscular atrophy on the matter of radical cure. Berger's operation consists of the following essential steps: 1, suture of the internal oblique muscle to Poupart's ligament, beneath the cord; 2, suture of the rectus muscle and its posterior sheath to the same ligament (over the cord); 3, suture of the outer portion of the aponeurosis to the anterior sheath of the rectus; 4, suture together of the two lips of the incision in the aponeurosis.

Suprapubic Cystoscopic Examination.—KRASKE (*Centralblatt fuer Chirurgie*, February 8, 1902).—In two cases the author was unable to introduce the instrument by way of the urethra, on account of prostatic carcinoma in the one and on account of myoma of the bladder in the other. However, he was able to see the interior of the viscus and further to see so great an extent of it, by the suprapubic route, that he considers the method worthy of a special consideration. He suggests that it be used in the following way, viz.: that the bladder be punctured and then the cystoscope be introduced through the canula, either at once or after the opening has been dilated at a later period.

Median Perineal Prostatectomy.—FERGUSON (*Journal of the American Medical Association*, February 22, 1902).—The author's technique is as follows: He introduces one finger into the rectum and a "depressor" into the bladder, then cuts through the perineum down to the prostatic capsule. From this the soft coverings are bluntly dissected, a side and a cross incision made into it. Then with the finger and a biting forceps the prostate is removed out of its capsule and a drainage tube introduced into the bladder through the opening which has necessarily been made in the prostatic urethra. Six cases are reported by Ferguson, all of which were completely cured. He concludes by reciting what appear to be plausible reasons for the superiority of the method over any suprapubic method as well as over the combined one.

Embolism of the Superior Mesenteric Artery.—SIEVERS (*Berliner Klin. Wochenschrift*, March 3, 1902).—There is related the case of a woman who died of this affection, twenty-nine hours after the first symptom, a severe colic, which came on while at stool. There were the usual manifestations of a severe abdominal

disturbance, but none which could be considered pathognomonic of the disease which now occupies our attention. At the autopsy was found an aneurism of the thoracic aorta, and in the superior mesenteric artery, just after it left the aorta, a long embolus which could easily be displaced. In consequence of this last named, the greater portion of the intestines had become injected and edematous, palpably the results of defective arterial supply. The author concludes by giving a critical *resume* of the work which has been done on this subject.

On Splanchnoptosis and its Surgical Treatment.—INGALLS (*Annals of Surgery*, March, 1902).—The author takes up at some length the causes and symptoms of the disease, and then proceeds to relate the history of a case upon which he operated. The patient was a woman of thirty, she had been a sufferer for about eight years, the symptoms having been controlled by supporting the abdomen in the beginning. A most exhaustive history of the case is given, and the operation described. The latter consisted in shortening the ligaments which suspend the liver; after which the woman was placed in bed for six weeks. A bandage was worn for three months subsequently, and at the end of this time the patient seemed greatly improved; however, as the time wore on she experienced a return of obscure abdominal symptoms, and while the author seems to regard his patient as benefited, still the reviewer cannot, after reading the original report, bring himself to unqualifiedly support the method.

Thoracic Resection for a Recurring Chondro-Fibroma of the Eighth Rib.—LE DENTU (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, Tome xxviii, No. 7).—The mass was as large as a hen's egg, with no pleural symptoms or attachment to the skin. It had been removed once with preservation of the pleura, so a more radical operation was advised. On account of the extent of the growth by this time, it was necessary to resect two ribs with a large amount of their integument and pleura. It was impossible to bring the lung or diaphragm out far enough to close the opening, so the author contented himself with sewing muscle and skin over it, and then drained the cavity. There was a dangerous degree of cyanosis on widely opening the chest cavity, and the patient contracted a double pneumonia, to which he succumbed shortly after the operation.

The Results of Operations for Tumor of the Superior Maxilla, Performed in the Clinic of Bergmann.—(*Archiv fuer Klinische Chirurgie* (LANGENBECK'S), Bd. 65, Hft. 2).—From 1890 to 1900 one hundred and eighteen of these cases were treated in the great clinic at Berlin, and of these fifty-three were cancerous. It was noted that men come to the surgeon much later than women, hence of the thirty-one cases which were refused as inoperable, it is not surprising that the greater number were males. The chief immediate danger to life from the operation can be easily shown to be pneumonia superinduced by chloroform or other general anesthetics and aspiration. This danger is greatly decreased by preliminary ligation of the external carotid and by using Rose's hanging position of the head in operating. The ligation is to be performed between the superior thyroid and lingual, else collateral circulation and profuse hemorrhage may be set up in a few minutes. The immediate mortality of total resection (forty-seven cases) at Bergmann's has been 14.8 per cent., while but seven of the patients have been permanently cured. They had thirteen cancer cases, ten of which succumbed to a recurrence and three to exhaustion. While of eleven sarcomas, six are definitely free from such complication; in addition, one osteoma may be reckoned among the seven out of forty-seven who were saved by total resection.

Traumatic Rupture of the Gall-Bladder without Injury of the Liver.—WILLARD (*New York Medical Journal*, March 1, 1902).—The patient, a boy of five years, had been run over by a heavy wagon, the wheels having passed over the pelvis.

At the time he was seen, three months later, the entire right side of the abdomen was filled with an elastic mass, which presented the usual physical signs of a fluid collection. The stools were of a characteristic clay color, so one is not surprised to learn that the fluid above mentioned was found, on opening the abdomen, to be bile. Two weeks later one quart more had collected, but after it was liberated no further reaccumulation took place, and the stools resumed the natural appearance. The child's nutrition rapidly improved, and he was entirely cured in a few months. The article concludes with a *resume* of the cases of this class which have been reported.

The Surgical Treatment of Lung Diseases.—GARRE (*Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie*, Bd. 9, Hft. 3).—The artificial pneumo-thorax which must complicate a pulmonary operation, on a case where no adhesions are found, is not to be regarded as an exceedingly serious matter in all cases. Of course, one lung is entirely collapsed, where the pleura is widely open; and at the same time the mediastinum is pressed to the healthy side, so that the other lung can also not functionate well; hence, dyspnea and cardiac collapse may set in. It is important to know that these physiological phenomena do not occur when the pleural opening is smaller than the lumen of the patient's larynx. When the process is localized, we may treat surgically tuberculosis, actinomycosis, abscess, gangrene, bronchiectasis, echinococcus, tumors. Next the author takes up the technique of pulmonary operations in general, giving the details of thorocotomy, pleurotomy and pneumotomy or resection. The results in tuberculous affections have not been very gratifying; actinomycosis has been treated surgically eight times, but we are not told with what success. A large per cent. of all abscesses treated in this manner have been cured, while but eighty of one hundred and twenty-two cases of gangrene have resulted similarly. Some considerable good has been done in bronchiectasis, though it is difficult to say just how much; echinococcus has, on the other hand, given almost uniformly satisfactory results. The author concludes that the lung surgery has come to stay, and has brought with it one of the greatest of the modern advances in our science.

The Operative Treatment of Chronic Bright's Disease.—PRIMROSE (*The Canadian Journal of Medicine and Surgery*, March, 1902).—A critical case was operated upon by splitting the capsule of the kidney, the operation being performed on both sides, but at two sittings. As a consequence, the amount of urine increased, the albumin almost disappeared, and edema and ascites were beneficially influenced. Sixty-two days after the last operation the patient was much better in every particular than formerly. The author does not offer any original explanation for what he terms a strange and wonderful result, referring merely to what Harrison and others have written on this subject.

The Treatment of Lymphatic Tuberculosis.—WILLEMS (*Journal de Chirurgie et Annals de la Societe belge de Chirurgie*, January-February, 1902).—The method of treatment proposed by the author is essentially different from those usually urged in such cases. The chief aim should be to cause as little scarring as possible, and Willems considers that his method accomplishes a cure and still subserves this end. He mentions the desirability of giving such patients the benefit of sea air where it is possible, but does not by any means make this a condition to his treatment. Before caseation has occurred, these masses can be made to shrink and often disappear by simply keeping the neck painted for a time with iodoform collodium. Where breaking down has commenced and extirpation is not undertaken, the author is not in favor of injection of the nodes; on the contrary, he urges the puncture and introduction of a small rubber tube into each soft center. This is left in place under dry dressing for about four weeks as a rule, and by proper antiseptic treatment of the skin a mixed infection prevented.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

Notes on the Treatment of Syphilis.—W. A. HARDAWAY (*Med. Bull. of Washington University*, Vol. i., No. 1).—Prof. Hardaway deprecates the too common routine use of mercury and the iodides in all cases of syphilis. The continuous treatment of syphilis for months and years is not good practice and does not justify the name given it, viz., the "tonic treatment." In addition to the debilitating effect of the syphilitic poison itself on the system, the prolonged use of mercury often does great harm. A low grade of mercurialization is produced, which has no power at all over syphilis, since its lesions appear even while the patient is taking the drug regularly. This mercurialization, moreover, tends to lower the patient's vitality and impair his nutrition, so that we can accomplish very little by means of the specific treatment until the patient's general health has been improved. In such cases the administration of mercury or the iodides should be preceded by a roborant course of tonics and stomachics, and the employment of judicious hygienic regulations. Dr. Hardaway has found the following formula for giving iodide of potassium (attributed to the elder Bulkley) useful:

R	Potassii iodidi	ss
	Ferri et ammonii citratis	j
	Tr. nucis vomicee	ij
	Aqua	iss
	Tr. cinchonæ comp	q. s. ad
M. Sig.	Teaspoonful in one-fourth glass of water after meals. The elixir of calisaya may be used instead of cinchona.	

The Treatment of Obesity.—W. EBSTEIN (*Die Heilkunde*, No. 2, 1902).—Whatever method we may choose of reducing a patient's fat, it is essential that the total amount of nourishment absorbed be less than the total amount of tissue-waste. This cannot be accomplished alone either by a diminution of the former nor by an increase of the latter, but only by a judicious combination of both. Banting proved this drastically in his own case. Violent physical exercise produced a corresponding increase in his appetite, and when he yielded to the latter he grew no thinner. Increased muscular activity produces a loss in weight only when the body substance thereby consumed is not entirely replaced. Ebstein recommends for the obese only such moderate exercise as will not be too great a strain on the usually weakened heart, and as will be of such a nature that it can be continued steadily for months and years. Stout people who go to the mountains and there indulge in climbing and other violent exercise may very well lose some twenty pounds in weight. But they return tired and worn-out, and after a little rest has brought their old appetite back, they soon regain the fat they have lost. Out-of-door "turning," such as the Germans are particularly fond of, is strongly recommended by the author, as are also walking when carefully regulated according to the endurance of the individual, and gardening. Doubtless if he were an Anglo-Saxon he would find much of which to approve in golf. Bicycling he absolutely forbids, doubtless owing to the wheelman's constant temptation to indulge in this form of exercise to excess.

As regards the diet, Ebstein advises particularly the withdrawal of carbohydrates. The proteids are not only an essential portion of our food, but have a comparatively slight tendency to form fats. Fats themselves have the valuable property of satiating rapidly, so that a meal of which they form a part produces a feeling of having eaten enough far more rapidly than one from which they are excluded. A patient whose total amount of food is reduced by means of the par-

tial withdrawal of carbohydrates, can be made to feel that he is getting plenty to eat far more readily than one from whose diet list the fats are withdrawn. His regimen, Ebstein maintains, can be persisted in for years with absolute comfort to the patient, so that after the latter has slowly, but steadily, lost sufficient weight, the reduction can be permanently maintained. He does not entirely discard hydrotherapeutic measures, but considers them unimportant in comparison with moderate exercise and diet. The diminution of the water drunk he believes to be a useless torture. He has never obtained any satisfactory results from the use of thyroid preparations or of the various mineral waters.

As regards the details of his regimen, he forbids entirely foods very rich in carbohydrates, such as sugar, potatoes, dumplings, puddings and the like, very sweet preserves and fruits. The true gourmand usually does not care for these articles at all. Of course the carbohydrates are not absolutely excluded. The green vegetables and lettuce, which not only quickly produce repletion, but which are excellent vehicles for the administration of fats, are freely made use of. The ordinary bread is, so far as possible, replaced by bread made from vegetable proteid, such as aleuronat or from casein. The former can be directly used in place of flour; for the method of using the latter, described in some detail, the reader must be referred to the original article.

It goes without saying, that a strict individualization is necessary. Some individuals can endure the withdrawal of carbohydrates far more readily and more completely than others. A sample dietary may be not without interest. The patient was a man forty-four years old, very stout, leading an active but mostly indoor life, using alcohol moderately, but very fond of carbohydrates and sweets. He was made to take moderate out-of-door exercise, and on Sundays a walk several hours in duration. During his summer vacation at the seaside or in the mountains he led a somewhat more active life. The diet list was as follows:

1. *Breakfast*: One large cup, about 250 c.c., of black tea without milk or sugar; 50 g. white or rye bread, toasted, with 20–30 g. butter.

2. *Dinner*: Bouillon, often containing lumps of marrow or an egg; 120–180 g. boiled or fried meat—particularly, in so far as they agreed with him, fat meats; vegetables as described above; salads, occasionally apple-sauce or a baked apple or dried fruit, stewed or otherwise prepared, but without sugar; for dessert he took usually raw fruit, preferably apples, but also strawberries and cherries; during the meal he drank two or three glasses of a light hock.

Soon after dinner: A large cup—about 250 c.c.—of black tea without sugar.

3. *Supper*: A cup of black tea as above; an egg or some roast meat, preferably fat, or some ham with its fat, or some cervelat sausage, or fish smoked or fresh—altogether 75–80 g. of meat; about 30 g. white bread and, according to the amount of fat in his meat, more or less butter, at most 15–20 g.; occasionally a little cheese and some fresh or stewed dried fruit.

The effect of this regimen was striking. Within six months he lost twenty pounds in weight and his girth diminished 16 cm. This loss has been permanent.

Individual variations to the above dietary will readily suggest themselves. If the regimen is as efficient and as pleasant as Ebstein says, it is well worth a trial.

Hydrotherapy of Insomnia.—A. LAQUEUR (*Die Heilkunde*, 1901, No. 12).—When hydrotherapeutic measures are to be used shortly before bedtime, for the purpose of inducing sleep, everything that would tend to excite the patient must be avoided, and only the soothing methods of using water should be employed. One of the most useful procedures is the wet pack. The patient is wrapped from neck to feet in a sheet wet with cold water and then covered with a woolen blanket. In order to avoid cerebral congestion cold compresses, an ice-bag or a Winternitz cap are applied to the head. If the patient goes to sleep he may very

well remain in the pack all night: otherwise the pack is removed in three-quarters of an hour, but may be renewed. After removing the pack anything that would chill the patient must be avoided; as that would tend to excite the patient and would tend to counteract the soothing effect of the pack. This procedure is particularly indicated in the insomnia of neurasthenia, anemia, cachexia, general malnutrition and in febrile conditions. Many nervous individuals, however, do not bear this treatment well, since the sensation of being tightly bound down produces a feeling of oppression and excites them. In such cases it is better to have the pack extend upwards only to the axilla, and to wrap the upper portion of the thorax and the shoulders in a separate wet cloth held in place by a figure of eight bandage, so that the arms remain free.

In many cases, however, the cold pack fails to produce the desired results and we may then make use of the prolonged lukewarm or warm bath, which probably is our most efficient means of combating insomnia. The patient is entirely immersed to the neck in water having a temperature of from 92° to 98° F. for from fifteen to thirty minutes. The bath is usually given soon before the patient desires to go to sleep, but may be given several hours earlier provided the patient goes to bed immediately after the bath, or at least remains perfectly quiet. The author has found such baths particularly useful in insomnia due to neurasthenia, hysteria, chlorosis, etc. They may be replaced by prolonged lukewarm sitz baths, especially in cases of prolonged sexual excitability. For the local applications of heat and cold, which are discussed in some detail, the reader must be referred to the original article.

The Potato Cure of Diabetes.—M. MOSSE (*Bull. Gen. de Therapeutique*, 1902, No. 7).—At the meeting of the Societe de Therapeutique, held at Paris on the 12th of February of this year, M. Mosse read a very interesting paper on the use of potatoes in diabetes. That diabetics could consume a certain quantity of potatoes without injury has frequently been observed; even Dujardin-Beaumetz found this to be the case. Mosse, however, held not only that potatoes could be taken with impunity in this disease, but that they have a genuine curative activity. He began by feeding his patients, in addition to a proteid and fat diet, one pound of potatoes daily, rapidly increasing the amount consumed to four pounds, and in one case even to the astounding quantity of six pounds daily. In all of his twenty-four cases he saw the amount of sugar diminish, in some of them almost to the vanishing point. The patients, meanwhile, improved strikingly, both subjectively and objectively. In one case an ulcer, which had obstinately resisted all treatment, healed promptly under this regimen; in another, which he saw in consultation with the surgeon Cestan, the glycosuria, which had been excessive, disappeared completely and the patient underwent successfully a capital operation.

These results, if true, are certainly surprising. After all, three pounds of potatoes represent nearly three-fifths of a pound of sugar, and six pounds of potatoes considerably over a pound of sugar. If such quantities of glucose can be ingested by a diabetic, not only without injury but with actual benefit, then many of our ideas concerning diabetes require revision. Mosse ascribes the therapeutic effect of potatoes to the potassium they contain. This theory does not seem rational, since inorganic salts of potassium, while sometimes of benefit in diabetes, produce no such striking results. The therapeutic value of potatoes could be demonstrated beyond question only if the amount of sugar excreted by a patient under a strict carbohydrate-free regimen should be found to be still further reduced by the addition of potatoes to his dietary. This Mosse has failed to do. At all events, if Mosse's results are even partially confirmed, it would seem that we need never put our diabetic patients under a strict carbohydrate-free diet, which is so often followed by ill after-effects, besides being a torture to the patient, but may feed them potatoes with considerable freedom.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

"Hanging Block" Preparations for the Microscopic Observation of Developing Bacteria.—HIBBERT WINSLOW HILL (*The Journal of Medical Research*, March, 1902).—The microscopic observation of the growth and development of the individual bacterium has been much neglected. Cultural observations are perused to the exclusion of this important method of studying bacteria. Exclusive study of morphologic characteristics of bacteria have been confined to examinations of stained preparations, which parallels the exclusive study of museum specimens of the higher plants. No botanist could rest content with such a method of studying plants.

Hill gives a description of his method of studying the hanging block specimen. The technique consists briefly in substituting for the ordinary "hanging drop" of liquid or jelly a cube of solidified agar, on the surface of which the bacteria are distributed. The inoculated surface of this block is applied to the under surface of the coverslip, and for convenience is then known as the "hanging block." Oxygen reaches the bacteria through the block or the seal by diffusion—certainly aerobic bacteria like *B. diphtheriæ*, or *B. typhosus*, grow readily in such a preparation. For anaerobes it is sufficient to expose the block to the action of pyrogallol as described later on in the article. This method is applicable to both motile and non-motile forms.

To make the preparation, pour melted nutrient agar into a Petri dish to the depth of one-eighth to one-quarter of an inch. Cool this agar and cut from it a block about one-quarter inch to one-third inch square, of the thickness of the agar layer in the dish. This block has a smooth upper and under surface. Place it, under surface down, on a slide and protect it from dust. Prepare an emulsion in sterile water of the organism to be examined, if it has been grown on a solid medium, or use a broth culture; spread the emulsion or broth upon the upper surface of the block, as in making an ordinary coverslip preparation.

Place the slide and block in a 37° C. incubator for five or ten minutes to dry. Then lay a clean coverslip on the inoculated surface, avoiding air bubbles. Run a platinum loop laden with melted agar around the block, to make a seal, preventing slipping of the block. Dry in the incubator five minutes to harden the seal. Invert this preparation over a moist chamber and seal with white paraffin. Bacteria growing at room temperature can be observed without a warming stage. For bacteria growing at 37° C. it is necessary to use a warm stage. Hill has devised several warm stages which are quite good and possess the good quality of being cheap.

Distribution of Anopheles in the Vicinity of Baltimore.—LEONARD K. HIRSHBERG and GUSTAVUS C. DOHME (*Johns Hopkins Hospital Bulletin*, February-March, 1902).—In the spring of 1901, at the suggestion of Doctor Thayer, these observers undertook a study of the distribution of anopheles in the vicinity of Baltimore. Thayer and Lazear had already found anopheles in one of the suburbs of Baltimore, Sparrows' Point, in 1899. The larvæ had never been found. It was found that a line could be drawn across the city, above and to the west of which the larvæ of the anopheles maculipennis were rarely found, and below and to the eastward of which few anopheles punctipennis were ever taken. The larvæ of anopheles maculipennis were first obtained on June 20th; the larvæ of anopheles punctipennis appeared first about the middle of July. The larvæ were captured throughout the summer until October in the backwater of the Chesapeake

Bay seventy times; twelve times in stagnant pools; in slowly flowing, almost quiet brooks and pools, twenty times. In marshy ground with very small scattered patches of water, larvæ were taken five times. The common bullrush or cattail, *typha latifolia*, was a shelter beneath which anopheles punctipennis was nearly always found. Larvæ of culex were frequently found in the same water with the anopheles. Larvæ were found eighty times alive in fish. After rain-fall the larvæ of anopheles were more frequently found.

The larvæ were "dipped" in the ordinary way recommended by Nuttall and Strangeways-Pigg. The larvæ were found usually near the margins of the pools.

About the average number of anopheles larvæ brought to the imago stage was five in every twenty, or twenty-five per cent. The average length of the larvæ captured was about 2.9 mm. The average time for the larvæ to become pupæ was twenty-two days in July and August, with an average temperature of 28.5 degrees C., and taken during the day. Two days was the average time for the pupæ to cast their shells and become imagoes. It was easier to keep alive the *A. maculipennis* than the *A. punctipennis*. The receptacles holding the larvæ were tall glass cylinders, and as the larvæ developed they were removed to larger vessels covered with mosquito netting to confine them when fully developed.

Experiments with food for the larvæ showed that if they be given rice water, as recommended, that they will be killed by the thick growth of bacteria on this substance. Such bacteria which developed were *B. lactis aerogenes*, *B. violaceus*, *B. prodigiosus*, etc. The larvæ thrived best on diatoms, *Spirogyra* and other algæ which can be collected with the larvæ from their native habitat. When the imago left its shell, it was kept alive with fresh fruits or with human blood.

Interesting experiments were made with the developed mosquito. They were allowed to bite patients suffering with the estivo-autumnal type of malaria, and the zygotes and sporozoites were readily demonstrated in the stomach wall, body cavity and salivary glands.

The Identification of the Colon Bacillus by Reactions Produced in Culture Media Containing Neutral Red; Observations on Reactions of Other Bacteria on the Same Media.—RANDLE C. ROSENBERGER (*The Philadelphia Medical Journal*, March 8, 1902).—It has been stated by several authorities that neutral red agar is a good medium for differentiating the bacillus coli communis from the bacillus typhosus. It has been claimed by Rothberger and Hunter that the bacillus coli communis upon this medium produces a fluorescence and that the medium is turned to a yellow color, nearly a canary yellow.

Neutral red is a basic color. The term "neutral" refers to the hue of the solution, and not to its chemical composition. Its neutral red is turned bright red by acids and yellow by alkalies.

Hunter claims that the bacillus coli communis and a few other organisms possess the power of reducing neutral red to a canary yellow fluorescent color, and that the bacillus typhosus never possesses this power of reduction. He claims to distinguish the typhoid "group" from the colon group in this way.

Rosenberger tried this reaction on a number of known cultures of the colon bacillus from different sources, and also tested it on other bacteria. He used ordinary agar with the addition of five drops of a watery solution of the dye to each tube containing 15 c.c. of neutral agar. He found that he could not obtain so positive reactions as those obtained by Hunter; in a number of cases that a deposition of small red crystals took place in this neutral red agar, and that there was some fading of the color. Fluorescence was noted in some cases.

From the experiments made by Rosenberger it is to be concluded that, while not affording a specific reaction in the case of the bacillus coli communis, neutral red agar should be classed as a valuable differentiation medium.

The typhoid bacillus, while it does not cause a fading of the color of the medium, never gives rise to the fluorescence noticed in some of the cultures of

bacillus coli communis. Furthermore, the test medium should not be depended upon as the only differentiating one in the examination of water, as several very common bacteria found in water give the same reaction.

An Atypical Acid and Alcohol-Proof Fungus from the Sputum of a Case Clinically Resembling Tuberculosis.—A. P. OHLMACHER (*The Cleveland Medical Journal*, January, 1902).—This observation concerns the presence of a tubercle-like fungus in the sputum of an individual exhibiting certain clinical evidences of phthisis. It was not pathogenic for guinea-pigs. It also had certain morphologic and staining peculiarities. It was regarded as a member of the ray-fungus family, to which belong other acid-resisting tubercle-like organisms, as the grass, timothy and dung bacilli of Moller and the butter bacillus of Rabinowitsch, the tonsillar bacillus of Marzinowsky and other recently described atypical fungi. The point of practical diagnostic importance is the ease with which such an organism as this might be mistaken for the tubercle bacillus of Koch when encountered in routine sputum examinations. Another point is the differentiation of this bacillus from the smegma bacillus.

The clinical history was as follows: An epileptic female patient in the Ohio Hospital for Epileptics gave a history of suppurative lymphadenitis cervicalis. No examination of the pus had been made. Patient declined in weight and contracted a cough. Examination of the sputum showed up the tubercle-like bacillus, which warranted a diagnosis of tuberculosis. The slides were shown to Ohlmacher, who noticed the peculiar tangled arrangement of the bacilli; also some branching was noted. The morphology corresponded to that given for the streptothrix pseudo-tuberculosis of Flexner, except it was a much more delicate organism. That it was not the smegma bacillus was proven by its capacity to retain its stain even when treated with alcohol, acids and ether used in the various combinations. It did not stain with Sudan. Upon four occasions during eight months guinea-pigs were subjected to subcutaneous injections of emulsions of the sputum. None of the seven pigs employed reacted. Two of the pigs were killed, one after four weeks and one after six weeks, and no nodular lesions were found. The other pigs remained unaffected. No cultures could be obtained of the organism on glycerin agar, blood-serum or blood-covered agar. Ohlmacher concludes that his case should be classified in the category with the examples of anomalous infection with atypical members of the ray-fungus group.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

The Operation for Uterine Cancer by Means of Schuchard's Paravaginal Incision.—F. SCHAUTA (*Monatschr. fuer Geb. und Gyn.*, February, 1902).—In trying to improve the results of operations for cancer of the uterus the author resorted, during the last decade, to a very careful selection of the cases. Thus, he operated on only 14.7 per cent. of all cancer cases coming under his observation, and even then only 26.4 per cent. of the cases operated upon by the usual vaginal panhysterectomy were alive after five years. Considering the recent reports of Wertheim, Freund and others, the author proves that the hopes regarding better remote results of those who advocate radical extirpation of uterus and all lymph glands per abdomen, in every case, seem not justified. He concedes, however, the advisability of removal of the parametria in every case. In his opinion this can be done in a very satisfactory way *per vaginam* by means of the Schuchard

operation. Schuchard operated by his method on 56 to 61 per cent. of all cases, and obtained 40 per cent. of cures after five years. Schauta gives in this essay a description of thirty cases operated upon in this way in his clinic, with five deaths. Of these, two died of marasmus some time after operation, in both cases a partial resection of the ureters being unavoidable. Of the other three, one died of sepsis, the second of pulmonary embolism, the third of peritonitis after perforation of the intestines. Taking into consideration the whole number of carcinoma cases observed in the clinic during the same space of time, the author emphasizes that this operation has doubled the percentage of operable cases. Since all these cases have been operated upon from June to November, 1901, the author is not in a position to speak about the remote results in his cases.

[The essentials of the Schuchard operation are as follows: It is a vaginal panhysterectomy aided by a lateral vaginal incision on the left side, extending from the left lateral vaginal fornix to the vaginal orifice, and penetrating the perineum to the left of the rectum as far as the sacrum. This incision gives an excellent view of the operation field, and allows the removal of the *parametria* and *ligamenta lata* as far as the pelvic wall. By this method the ureters are clearly seen and dissected before the broad ligaments are divided.—Ed.]

A Unique Case of Ovariectomy.—KRABBEL (*Monatschr. fuer Geb. und Gyn.*, February, 1902).—Patient is a gentleman, teacher in a high school, with mustache and short whiskers. Abdomen distended by a large tumor. Penis apparently normally developed, but not perforated by the urethra. There is an almost complete hypospadias. No scrotum, no testicles; there are, however, two folds resembling labia. Under anesthesia a small vagina with a cervix was detected. At the operation the tumor was found to be a multilocular ovarian cyst of the left side. One year and a half later a new tumor developed. It was extirpated and proved to be a teratoma, showing sarcomatous and myxomatous degeneration. Since the second operation the patient, a pseudo-hermaphrodite *femininus*, is well.

Formation of a Fibroid in the Uterine Stump After Supravaginal Amputation.—DOLERIS (*Tr. Soc. d'Obst. de Gyn. et de Pæd. de Paris, rep. Annales de Gyn. et d'Obst.*, Paris, February, 1902).—Hemorrhages (menstruation?) more copious and painful than they were at the time of menstruation previous to the operation, were observed by the author in a case in which supravaginal amputation had been performed on account of multiple myomas a year before. Doleris bisected the cervix, and found in the canal of the uterine stump a fibroid of the size of a walnut. After extirpation of this growth the hemorrhages ceased.

Etiology and Therapy of Pruritus Vulvæ.—SEELIGMANN (*Deutsche Med. Wochenschr.*, 1902, No. 9).—Pruritus vulvæ is found in the presence of gonorrheal or other pathologic secretions from the vagina, in general pruritus, pediculosis, in cases of masturbation or of diabetes mellitus, in congestive conditions, etc. Cases in which a primary cause cannot be found have been called "neurotic." Studying these "neurotic" forms of pruritus the author was able to find in all instances a diplococcus which resembles the gonococcus in form, but differs from the latter and other diplococci as far as reaction to stains and growth on culture media is concerned. The writer treats these cases exclusively with guaiacolvasogen, and has almost always met with success. Excoriations of the vulvar mucous membrane, if any, are first cured by the application of some indifferent salve. Then a ten per cent. solution of guaiacol is applied for three days in succession, once daily. If the effect is not satisfactory, a fifteen or twenty per cent. solution is tried, care being taken that the medicine is applied to the itching areas only. If after the lapse of a few days the itching sensation recurs, a repetition of the same procedure will suffice to obtain a lasting result.

Psychic Disturbances and Convulsions Produced or Exaggerated by Menstruation.

—VIALLO (Annales de Gyn. et d'Obstr., February, 1902).—Menstruation serves to eliminate toxic substances which are products of metabolism and are stored up in the blood. If the secretory function of either uterus or ovaries is impaired, this elimination does not take place in the proper way. Auto-intoxication is the consequence. This condition again leads to functional disturbances in various organs, among which the gastro-intestinal tract and the urinary system are most frequently affected. The secondary disturbances, on the other hand, increase the auto-intoxication. In the author's opinion these conditions explain the cases in which menstruation is accompanied by (1st) elevation of temperature; (2d) psychic disturbances, generally characterized by mental confusion; and (3d) convulsions (in epileptics and paralytics).

Enemata of Normal Saline Solution in Hyperemesis Gravidarum.—CONDAMIN

(Lyon Medical, February 2, 1902).—The author applies, in cases of uncontrollable vomiting during pregnancy, enematas of about 300 grams, several times a day for about a week, at the same time keeping the stomach absolutely empty. When the patient cannot retain the enematas, a few drops of tincture of opium are added to each enema. He claims satisfactory results in eight cases so far treated by this method.

Cesarean Section Performed for the Third Time on the Same Patient Under Local Anesthesia.—H. R. SPENCER (Journal of Obst. and Gyn. of Brit. Emp., February, 1902).

Schleich's eucaim solution was injected along the old scar for six inches. The new incision was made through the scar. Owing to the adhesions from the previous operations, the peritoneum was only slightly opened at the upper and left part of the incision. The first part of the operation (incision and delivery) was practically painless; the sewing up of the wound in the uterus was also quite painless, but there was quite a good deal of pain during the abdominal stitching. Patient made an uninterrupted recovery. In the author's opinion, the risk of sepsis in a subsequent cesarean section is reduced if adhesions have formed between the previous incisions in the uterine and abdominal walls, as thus the child may be delivered with but a slight or no opening of the general peritoneum.

Cesarean Section Performed Four Times on the Same Patient.—N. CHARLES,

Liege in France (Americ. Medicine, "Foreign Notes," March 15, 1902).—The author reports the history of the fourth cesarean section performed on a small rachitic patient whose pelvis has a sacro-pubic diameter of six centimeters. Both mother and child are reported as well. Of the three children previously delivered in the same manner, two are well and one died at the age of thirteen months from bronchitis.

Appendicitis During Pregnancy.—PAUL MASSAREL (These de Fac. de Med.,

Montpellier, France; Rev. Annal. of Gyn. and Ped., February, 1902).—The author shows that appendicitis during pregnancy is far from being a rare condition, and thinks that pregnancy predisposes to this disease. The symptoms of the disease during this stage do not materially differ from those of the typical appendicitis. He draws from his extensive studies on this question the following conclusions: (1) appendicitis is a complication of pregnancy of such frequency that it deserves the attention of all practitioners; (2) appendicitis occurring in a pregnant woman puts her life in danger and compromises the life of the child; (3) puerperal appendicitis is frequently accompanied by symptoms of general septicemia; (4) the symptoms of puerperal appendicitis resemble those of the non-puerperal, the diagnosis being usually easy; (5) the prognosis of puerperal appendicitis depends in a large measure upon the treatment employed; (6) sur-

gical treatment is the only treatment applicable; it should be employed early in all cases.

ORTHOPEDICS.

IN CHARGE OF

MALVERN B. CLOPTON, M. D.

Congenital Elevation of Shoulder.—JOEL E. GOLDTHWAIT, M. D., and CHAS. F. PAINTER, M. D., Boston (*Boston Med. and Surg. Jour.*, December 26, 1901).—A report of two cases illustrating the two types of deformity treated by operation. The first case, in a boy of twelve years, was due entirely to an imperfect development of the muscular structure, and was probably caused by some injury at the time of birth, as has been clearly demonstrated in its analogue, congenital torticollis. The whole shoulder was elevated, but there was no disability. The operation, through a long incision along the posterior border of the scapula, freed the attachment of the trapezius to the spine, exposed the rhomboid muscles, which were largely fibrous tissue, and after whose division, and also the levator anguli scapulae, it was possible to draw the scapula to the side, but not to depress it on account of the shortening of a portion of the serratus magnus. This latter muscle was divided, and the scapula well replaced except for the deformity due to the bending forward of the portion of the bone above the spine. The trapezius was reattached higher on the spine, and the arm dressed with the outer part of the shoulder elevated, thus throwing the angle of the scapula far out at the side, and this was held in by a strap passing across the inner portion of the shoulder, entirely reversing the angle of the bone. Recovery was uneventful. Passive motion was begun in two weeks, followed shortly by active use. The arm functionates normally. Photographs show the case before and after the improvement.

In the second case, a healthy, active boy of eleven years, the position of the shoulder was associated with an embryologic condition, there being a distinct articulation between the upper angle of the scapula and vertebra. The use of the arm had not been restricted except in the extreme elevation of the arm when extended. There was cervical curvature of the spine and marked facial asymmetry. The right scapula was small and its lower angle was on a level with the middle of the vertebral border of the left. The right scapula was attached at its upper angle to the seventh cervical vertebra by an osseous band which acted as a pivot, and contained articulations at either end. This band was removed, and under massage and exercises, with a head sling to correct the position of the cervical spine, there has been distinct improvement.

The Treatment of Congenital Hip Displacement, With Special Reference to the Ambulatory Method.—H. A. REEVES, F. R. C. S., Edinburgh (*Lancet*, November 23, 1901).—The author claims two years' priority in this treatment, when the open method was still practiced by Lorenz. Reduction is accomplished by the combined Bigelow and Paci methods, and a modified Thomas hip splint with traction as applied. He is skeptical of the claims of those who state that the bloodless method can give perfect results, but is contented with converting iliac displacements into anterior, dorsal, or supracotyloid. This considerably diminishes shortening and cordosis, and improves the walk; and this is all that can be expected. The dangers of the open methods are dwelt upon at length.

Congenital Dislocation of the Shoulder, With Report of Two Cases of Dislocation Posteriorly.—DAN'L W. MARSTON, M. D. (*N. Y. Med Journal*, March 16,

1901).—The old ideas of the conditions found in Smith's description in 1839, and as agreed to by Seudder in 1890, have to be abandoned since operative intervention was instituted by Phelps in 1895, the view of irregular development being replaced by the traumatic theory. Phelps, in examining the glenoid cavity with his finger, found the posterior border of the cavity broken away and the detached fragment attached to the capsule; and in two other cases operated upon, the detached fragment was found in like manner. Ordinary manipulation and outward appearances do not in these cases give sufficient evidence on which to decide whether the dislocation is due to traumatism or to non-development, and from a review of his cases and those in the literature the author advocates the belief of Phelps, that such dislocations, subcoracoid or subspinous, are due either (1) to traumatism, either at birth or in utero, or (2) to some prenatal diseased condition of the joint—*e. g.*, tuberculosis or osteomyelitis in utero.

The majority of these cases can be traced to a difficult delivery, and more than a few of the heretofore supposed cases of obstetrical paralysis are undoubtedly instances of traumatic dislocations at birth, with the paralysis as a coincident complication due to the same causes as produced the paralysis, and that the paralysis is not a primary etiologic factor of the dislocation. In Stone's six autopsies he found no evidence of faulty development.

The treatment may be mechanical and operative. Manual manipulation should be attempted in patients under three years of age. Failure in this operative treatment as advised by Phelps is clearly indicated. The prognosis is even better than in congenital hip. Eleven cases have been operated to date.

The author draws the following conclusions:

1. It is of the utmost importance to distinguish between cases of dislocation and obstetric paralysis.
2. The treatment of the former condition is immediate reduction by manipulation if possible, otherwise operative.
3. Every infant should be carefully examined at birth, for at this time reduction is easiest performed.
4. From the facts that a fracture of the glenoid cavity was found in three of Phelps' cases, and that nearly all cases show difficult labor, they are not of paralytic origin or due to non-development, but are traumatic, the finger of the accoucheur in the axilla being accountable.
5. The prognosis of the operative treatment is excellent.
6. Like congenital hips, the cases of the shoulder are little benefited by mechanical treatment.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Etiology of Meningitis and the Diagnostic Importance of Lumbar Puncture.—LEWKOWICZ (*Jahrbuch fuer Kinderheilk.*, vol. lv, part 3, p. 266, March 1, 1902).—The author groups his results under the following heads:

1. Epidemic cerebro-spinal meningitis.
2. Acute infective non-specific meningitis.
3. Tubercular meningitis.
4. Non-infectious processes.

Epidemic Cerebro-Spinal Meningitis.—*Diplococcus intra-cellularis meningitidis* usually found in the protoplasm of the cells of the spinal fluid. These cells are nearly always the polymorphonuclears. Lymphocytes are also found in the fluid,

but they do not contain the germs. Occasionally the diplococcus is found in the endothelial cells of the fluid. Staining by Gram's method negative. Meningococcus grows easily on glycerin or serum agar.

This type of germ was found in all (7) of the author's cases. There is, however, another type of this germ (which, for instance, is positive with Gram's stain). The question of the specific etiologic factor of the epidemic form of meningitis is therefore not decided as yet.

It is noteworthy that various investigators have found a diplococcus (resembling the meningococcus very closely) in secretions from nose, pharynx and ear, in sputum, in stools, in pericardial, pleural and arthritic exudates, and in the urine. It is possible that the meningitis may thus be secondary to the infectious process elsewhere.

Acute Non-Specific Meningitis.—In this class of cases any of the pus-formers may be found in the fluid; pneumococcus, staphylo- and streptococcus, *B. coli communis*, *B. typhosus*, and influenza bacillus. Infection here is by extension (skull trauma) or ear disease, by metastatic route (pneumonia, etc.).

Tubercular Meningitis.—Intracranial pressure (measured by manometer at time of lumbar puncture) very high. Fluid contains large quantity of albumin. Lymphocytes more numerous than the polymorphonuclears in the fluid. In many cases tubercle bacilli could be found in the sediment; in all cases animal experiments were positive.

Non-Infectious Process.—Meningitis after insolation, chronic simple hydrocephalus. In the cases of this class examined by the author, the lumbar puncture gave negative results.

Interstitial Nephritis in Infancy.—IDA DEMOCH (*Archiv. fuer Kinderheilk.*, vol. xxxiii, parts 3-6, p. 284) reports a case of an infant of two months brought to the hospital showing uremic symptoms. Examination of urine showed large quantities of abumin, with great numbers of granular casts containing numerous fat droplets. The post-mortem showed the characteristic picture of interstitial nephritis, with cardiac hypertrophy. A definite cause could not be obtained.

The Heart of the Child.—D. B. LEES (Presidential Address Before the Harveian Society, 1902).—In this admirable address Lees calls special attention to the importance of routine examination of the heart in all children. He shows that the neglect of this procedure frequently results in the overlooking of conditions which could be recognized by careful examination, and very often rectified by appropriate treatment. He calls especial attention to the need for very light percussion in the examination of children's hearts. The author determines the relative heart dullness; he lays special stress upon dullness in the fourth right interspace as being the area over the right auricle. According to Lees, slight dullness can always be obtained in this area, even in normal children. Whenever the right auricle is dilated, as in pneumonia, and in the later stages of endocarditis of the left heart, this dullness is very considerably increased. Lees goes so far as to assert that in cases of pneumonia he uses this diagnostic point as an indication for bleeding (which he does in the form of leeching), when it would appear that there was excessive distention of the right auricle. The left border of cardiac dullness is usually internal to the mammary line, but it may extend to it; extension of the cardiac dullness to the left of this line is always an evidence of dilatation or hypertrophy of the heart. Evidences of congenital heart lesion should always be sought for. One of the most common of these is a systolic murmur of the heart just below the junction of the left and fourth costal cartilage with the sternum. This is usually indicative of incomplete cardiac septum. Patent foramen ovale unassociated with the other lesions probably does not cause murmurs. A systolic murmur over the tricuspid is often heard in normal children,

and does not indicate organic cardiac lesion; no explanation of the fact is offered. The author calls especial attention to the dangers of acute dilatation of the heart in some infectious diseases, notably diphtheria, influenza, and typhoid. He also insists that the first effects of rheumatism are shown on the heart muscle. Careful examination will frequently show a dilatation of the heart before there is any evidence of valvular lesion. It is pointed out that the cardiac manifestations of rheumatism in children may be far more distinct than the arthritic ones, and the association of endocarditis, rheumatism, and chorea is again insisted upon. Mention is made of the diplococcus described by Poynton and Paine as being the specific cause of rheumatism. The author considers the salicylate of soda as definitely antagonistic to the rheumatic process. It is well borne in comparatively large doses by children. Where there is a tendency to relapse in rheumatic cases, small quantities of salicylate should be given daily for a long time, even after the subsidence of the acute symptoms. It is of advantage to combine with the salicylate the use of bicarbonate of soda, the dose of the latter being twice that of the former. To repress the cardiac inflammation of rheumatism the author finds leeching and the local application of ice-bags efficacious. He does not use digitalis in the acute stages. For the acute cardiac dilatation of diphtheria he has had best results with hypodermic injections of atropine.

Carcinoma of the Liver in Childhood.—SCHLESINGER (*Jahrbuch fuer Kinderheilk.*, vol. lv, page 300, March, 1902), has collected the published cases of carcinoma of the liver in childhood. There are ten cases of primary carcinoma in children up to fourteen years of age, and eleven cases of secondary carcinoma. Of these the kidney was the seat of the primary lesion eight times, the pancreas twice.

From a study of his own case and the literature the author concludes that:

1. Primary carcinoma of the liver in childhood, especially in the first years of life, is very rare.
2. The gradually increasing size of the liver is a constant sign.
3. Enlargement of the spleen, ascites, and extreme cachexia usually mark the rapidly fatal course; icterus has not been observed.
4. The liver carcinoma is usually nodular.
5. Adenoma of the liver is of much importance in the pathogenesis of the primary liver carcinomata.
6. Secondary carcinoma is also very rare—is usually secondary to growth in the kidneys—as a rule produces no symptoms *per se*.

Cirrhosis of the Liver in Childhood.—WALLS (*Pediatrics*, March 15, 1902) points out that this is an exceedingly rare affection in childhood. The etiological factors are: male children affected more than female (5-1.) Alcoholic history has been recorded in less than twenty per cent. of the cases; syphilis (hereditary) is an etiological factor in about ten per cent. of the cases; tuberculosis is a relatively frequent causative factor. In many cases the primary lesion is a tubercular pericarditis with synechiæ of the pericardium and subsequent hepatic cirrhosis. Chronic sepsis and valvular lesion with nutmeg liver have occasionally been found causative.

The cirrhosis of childhood is more apt to be of the mixed than of the pure atrophic or the hypertrophic type. The symptomatology of the disease is often obscure, and it may be difficult to differentiate the condition from chronic peritonitis. Large liver and spleen, icterus, suggillations of the skin, gastro-intestinal hemorrhages and free fluid in the peritoneal cavity are, however, suggestive of hepatic cirrhosis. Prognosis is unfavorable, and course usually rapid.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

Sero-Therapy in Epilepsy.—CARL CENI (*The Med. News*, Nos. 10 and 11, 1902).—This interesting and important essay won the Craig Colony Prize for original research in epilepsy in 1901. Although, on account of its length, it does not lend itself very well to abstracting, yet it contains so much that is novel that it is worthy of at least a *resume*. The object of the paper is to study the pathogenesis of epilepsy for the purpose of adding to the proof of the autotoxic theory of this disease. There is in all probability some toxic irritating cause of a biochemical nature, and elaborated by the organism, which is of capital import in the determination of the epileptic fit. In order to confirm the autotoxic theory of epilepsy, the author injected epileptic serum into hens' eggs. The remarkable increase of the teratogenic power of the blood of epileptics as compared with that of healthy individuals can be explained by no other interpretation. It is even probable that the circulating toxic principles, which have the property of interfering with the normal development of the embryo, are closely connected with those poisons which, acting simply as an irritant upon the formed elements, produce the epileptic phenomena. This theory has been proven by hundreds of experiments. Inasmuch as these results have led the author to believe that the epileptic attacks are the consequence, at least for the most part, of the toxic products circulating in the organism, it was natural to conclude, following the reasoning of modern sero-therapy, that a similar method of treating idiopathic epilepsy might be discovered. The first experiment was as follows: Small doses of epileptic serum were injected into other epileptics for the purpose of finding out if the specific poison would introduce into the organism any property that might be of therapeutic value to other less severe and earlier cases. No result was obtained. The next experiment had for its object the causation of an immunity in the patient against the toxic substance found in his own organism by giving progressive doses of the same serum. Two procedures were followed in the experimental studies: one, the injecting of blood serum of one epileptic into a second epileptic less ill than the first; the other, the reinjecting into an epileptic some of the blood serum drawn from himself after bleeding. The author's hypothesis of the pathogenesis of epilepsy deserves mention, both on account of its importance in this research and because it differs from most of those who hold the autotoxic theory of this disease. It is that the crises are only brought about by a discharge of dynamic energy gathered in epileptogenetic centers in consequence of an irritation which is lasting, constant and uniform for an indeterminate period of time. The therapeutic experiments were carried out as follows: Tubular needles of large bore, fixed in a glass pipette, 10 cc. long, were used. The tubular needle is inserted into a venous trunk which is compressed above. The free end of the tube empties into an Erlenmyer bottle. Great care is of course paid to cleanliness and antisepsis. The quantity of blood drawn varies with each individual; as much as 250 to 300 cc. was taken at one time from one patient. The serum is separated and is then divided into portions of 10 cc. each, and with a little camphor is separately bottled after fractional sterilization. The serum is then ready for use. Both in injecting serum from one epileptic into another and in reinjecting into the same patient, progressive dosage was followed, beginning with 3 to 5 cc. and increasing up to 10 or 20 cc. in thirty or forty days. This is necessary from the fact that some patients react violently to the first injections even when made in small doses and present symptoms of an acute intoxication, which may even be dangerous. This is the crisis

of adaptation and is quite transitory, disappearing after a few injections. The whole method of treatment is briefly as follows: During the first month at intervals of a few days, a total quantity of 40 to 50 cc. is injected into the glutei. In the following months, when the patient has overcome the first adjusting period, the total dose is carried to 80 to 100 cc., especially if the patient begins to improve. The injections are continued until the maximum advantages are obtained, and when the patient no longer reacts. Ten epileptics have thus far been treated, and have been under observation for one to two years. All the cases experimented upon were of the severest form of idiopathic epilepsy, both in regard to the number and intensity of the motor crises and to the presence of psychic and sensorial phenomena. The therapeutic results are divided into two groups; eight cases with positive and two cases with negative results. The patients of the first group showed marked improvement in weight and in general nutrition. In some of them the improvement gave promise of a definite cure; there was total disappearance of all epileptic manifestations which did not recur after the treatment was stopped. The psychic improvement was just as marked. It may be said that even if the benefits obtained, as regards the general condition and a more or less remarkable diminution of all epileptic manifestations are only transitory, they are none the less of sufficient duration to commend the treatment to general adaptation. In the two negative cases the treatment had to be stopped after a brief time, because the patients showed a loss of weight and a general increase of epileptic manifestations. Careful clinical histories of all these cases can be found in the article. In conclusion the author states: "These researches demonstrate that in epileptic blood there are two active principles, which their different and opposite properties show to be of different nature and origin. One of these principles circulates in a free state and is only endowed with toxic properties when injected into the organism of another epileptic. The toxic effect may be immediate and direct and may follow even small doses. The phenomena it determines are transitory in character. The other active principle circulates in the blood of epileptics but only in a latent state. It is endowed with properties which have a stimulating power on the metabolic cells, which are concerned with the elaboration of the epileptogenous toxic agents. These stimulating properties appear only as the remote consequences that take place as the result of repeated injections, over a considerable period of time, with the blood serum of an epileptic into himself or into another epileptic. These stimulating properties can deeply modify nutrition and epileptic manifestations. Upon both they exert a slowly progressive action which may be restoring and therapeutic or weakening and poisonous. In these cases in which the principles have restoring therapeutic properties, there always results a remarkable increase in body weight and an improvement or total disappearance of disturbances of organic functions or of social life. In cases in which the said principles do not act favorably on metabolism, the serum injections are useless." This essay is earnestly recommended to all those who are interested in epilepsy, both from the standpoint of pathogenesis and therapy.

A Contribution to the Clinical Significance of Absence of the Tendo-Achillis Jerk.—EDWIN BRAMWELL (*Brain*, Winter number, 1901).—An investigation undertaken with the hope of ascertaining more exact knowledge as to the diagnostic significance of the absence of the Achillis jerk. In order to give this reflex a clinical value, it must first be determined how frequently it is found in health. The reflex is best obtained in the kneeling position; the patient kneels on a chair with his feet projecting a few inches over the edge. The tendon is struck sharply, close to its insertion into the os calcis, and if the jerk is present the stroke is immediately followed by a quick plantar flexion movement of the foot at the ankle joint. The true jerk is a quick movement occurring immediately after the stroke and is quite distinct from the slight movement of the foot, which occurs as an mechanical effect in cases in which the reflex is lost. To ascertain the state of

the Achillis jerk in health and in diseases other than those of the nervous system, the following material was made use of: fifty children in the wards of a children's hospital, 219 school children, 100 convalescent fever cases, 80 medical students, 230 individuals over forty years of age, 100 insane cases, 100 patients in the wards of a general hospital; 100 nervous cases of a great variety of diseases were examined to ascertain the state of this reflex in organic nervous conditions. The following conclusions are noted as the result of this careful and convincing study: 1. The Achillis jerk is most easily and conveniently obtained in the kneeling position. 2. The reflex is probably constantly present in health in persons under fifty years of age. In other words, the loss of the Achillis jerk in a person under fifty years of age, in the absence of any local cause, such as great edema of the leg which may mechanically interfere with the examination, is always to be looked upon as a sign of organic disease, with the same assurance as loss of knee jerk is so regarded at the present time. 3. In persons over fifty, the activity of the Achillis jerk diminishes with increasing age, consequently in old people absence of the Achillis jerk, especially if bilateral, cannot be regarded as having the same diagnostic significance that it has in children, young persons, and middle-aged adults. 4. In the majority of cases of disease in which the Achillis jerks are absent the knee jerks are lost also; *e. g.*, most cases of tabes, peripheral neuritis, etc. 5. In certain conditions in which the knee jerks are unaltered, the Achillis jerks are found to be absent or greatly diminished. Under these circumstances, the loss of the Achillis jerk may prove a valuable adjunct in diagnosis. 6. Since in tabes the Achillis jerk is usually lost before the knee jerk, its condition should always be ascertained in suspected cases of that disease, and more particularly in those cases in which the knee jerks are present. 7. It has been shown by Babanskii and others that in cases of sciatica the Achillis jerk is usually lost on the affected side. The loss of the Achillis jerk proves the existence of a sciatic neuritis. The absence of the Achillis jerk is for this reason a physical sign of importance in the diagnosis between true sciatica and the hysterical form of this disease. 8. The loss of the Achillis jerk caused by a sciatic neuritis may persist for years after the sciatica has itself disappeared. 9. Cases of multiple neuritis are met with in which the Achillis jerks are absent, while the activity of the knee jerks remains unimpaired. In such cases the absence of the Achillis jerk is of value in diagnosis. 10. It appears probable that the Achillis jerk is sometimes lost as the result of syphilis, just as the Argyl-Robertson pupil sometimes occurs as the result of that disease, unaccompanied by other signs of tabes or general paralysis. The absence of the Achillis jerk is sometimes of value in localizing lesions in the spinal cord or in the nerve roots.

The Condition of the Spinal Cord in Tuberculosis of the Lungs in the Insane.—RANSOHOFF (*Monatschr. fuer Psychiatrie u. Neurologie*, February, 1902).—The diseases of the peripheral nerves in cases of phthisis have been frequently the subject of study, but the cord and brain in tuberculosis of the lungs seems to have been neglected. This investigation was based upon a material of eleven cases. As a rule the forms of insanity which develop tuberculosis are those cases in which a careful clinical history from a neurological standpoint is almost impossible on account of the dementia which is present. The results in general from a pathological point of view are as follows: 1. The white substance of the cord, especially, the long fibers suffers considerable change in tuberculosis, which shows itself at first by simple Marchi degeneration and later by complete destruction with the presence of granular cells and hypertrophy of the glia. 2. Especially disposed to such changes are those cases of phthisis which run a rapid course and which are without doubt of mixed infection. 3. The posterior columns are most profoundly affected in the cervical region and the pyramidal tracts in the upper lumbar region. The extramedullary portion of the roots are not affected.

4. Hydropsical swelling is found frequently in the cords, but the degeneration mentioned above does not seem to stand in relation to it.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

A Case of Severe and Threatening Hematuria from Movable Kidney with a Discussion of the Causation of this Condition.—CABOT (*Boston Med. and Surg. Jour.*, March 6, 1902).—It is not uncommon in cases of movable kidney to see blood in the urine in microscopical amount, but it is rare to see it in such quantities as to give urine a characteristic color. The right kidney of this patient could be palpated, having its lower pole at the pelvic brim and its upper pole at the edge of the liver. It was much enlarged, and so fixed that moderate force could not replace it in its normal position. Examination of the bladder was negative. At first the hematuria was intermittent, but later it became so severe and continuous that the patient was pale and waxy in appearance with a rapid and feeble pulse. As this condition contra-indicated any operative procedure, and as the patient's position in bed of half sitting and half bending forward favored downward sagging of the kidney, it was decided to raise the foot of the bed with the patient upon her back, so as to relieve this downward pull. For the first forty-eight hours the hemorrhage appeared to be increased, but soon afterwards it ceased entirely, only to return when the sitting position was again resumed. After forty-four days the size of the kidney had diminished to little, if any, above normal, and, as the hemorrhage was absent, the patient gained in strength, appetite and digestion. The kidney could now easily be made to occupy its normal position. A nephropexy was done at this time. The capsule proper of the organ appeared milky and was thickened. This was split along its convex border, slightly separated, and stitches inserted. The patient has been free from bleeding since the operation, May 20, 1901.

The author suggests that in many of these enlarged movable kidneys, in addition to the hydronephrosis, the congestion plays an important causative role in the enlargement, especially on the right side, as here the renal artery is long and the vein short, making it easy for sagging to cause venous obstruction. Besides, the vein having thin walls and a weak current, is more prone to obstruction. This congestion is, too, probably, the exciting agent in cases of hematuria without discoverable cause that we frequently cure by cutting down upon the kidney and splitting the capsule.

Chronic Cystites.—HALLE and MOTZ (*Ann. des Mal. des Organ. Genito-Urin.*, January, 1902).—The authors report their microscopic and histologic findings in one hundred bladders from patients who have succumbed to chronic inflammatory affections of the urinary apparatus, non-tubercular. The cases are divided into three groups:

I.—Pure chronic cystites: those in which the chronic inflammation alone is responsible for the lesions.

II.—Complex chronic cystites: those in which the chronic inflammation appears upon a wall previously modified by the action of different mechanical causes.

III.—Degenerations of the wall from undetermined causes.

Macroscopically in *pure chronic cystites*, the bladder capacity is much diminished,

sometimes to twenty grms.; moreover its form and capacity become fixed. The walls lose their suppleness, the bladder its susceptibility to variation of form from distention and pressure, and is more or less a solidly fixed organ with an invariable capacity. The walls are thickened in their entirety, giving to the organ upon palpation the feel of solidity. The internal surface loses its pale, rose-gray of health, and takes on a dull, deeper slaty tint. Here and there are spots of deeper pigmentation, of vascular origin, true ecchymoses. Villous transformations are quite characteristic. The surface feels velvety, and under water we readily recognize this velvety feel to be due to little papillary projections. More frequently the internal aspect is granular, rough to the touch. Pseudo-membranous exudates and leucoplasia plaques are rare; while formations of cysts and true vesical ulceration are not dependent upon chronic cystitis, though they may be coincident with it.

Upon section the bladder wall shows an increase in thickness even up to two to three centimeters. The several layers have more or less lost their independence and are blended together. There is an increase in the conjunctive interstitial tissue. The external sero-fibrous layer of the bladder, too, is manifestly modified. It is thickened, indurated and adherent. The vessels and nerves are enveloped and fixed by thick, fibrous partitions.

In a word, from the macroscopic study of these cases, chronic cystitis is characterized by deep lesions, modifying all the layers of the bladder wall; it is a total cystitis.

A New Test for Albumen.—FUHS (*Med. Rec.*, March 8, 1902).—The test solution consists of a mixture of equal parts of glycerine and carbolic acid. To two cc. of this solution in a test tube add two cc. of filtered urine. Mix well together by shaking and stirring. If the resultant fluid is clear, the urine is free from albumen; if the slightest turbidity is noticeable, the urine is albuminous.

The Severing of the Vasa Deferentia and Its Relation to the Neuropsychopathic Constitution.—SHARP (*N. Y. Med. J.*, March 8, 1902).—Heredit of moral qualities is as evident as that of physical conditions. The marriage of the unfit should be restricted. Every male who passes the portals of a State institution—be it almshouse, insane asylum, institute for the feeble-minded, reformatory, or prison—should be rendered sterile. This should be done in as humane and considerate a way as possible. The author has severed the vasa deferentia in forty-two patients, and can state positively that it does not impair the sexual power of those operated upon, that they improve mentally and physically, in that they increase in flesh, feel that they are stronger, and that while prior to the operation they made no advance in school, their advance now is fairly satisfactory. Castration practically destroys the future enjoyment of life, and the knowledge of the patient that he is deprived of sexual power has a very depressing effect.

Section of the vasa deferentia is then the rational means of eradicating from our midst a most dangerous and hurtful class.

Median Perineal Prostatectomy—Total Removal of the Prostate Gland—Six Cases.—FERGUSON (*J. A. M. A.*, February 22, 1902).—After reviewing the previous literature and mentioning the methods of Nicoll, Alexander, Guiteras, Syms and von Dittel, the author proceeds to describe his own surgical technique of perineal prostatectomy. With his prostatic depressor passed through the urethra into the bladder, and the middle finger of the left hand in the rectum at the apex of the prostate, he introduces a knife into the perineum two inches in front of the anus until it reaches near the tip of the finger in the rectum, and with one stroke cuts through all the structures to the prostate without injuring the urethra, prostate, rectum or anal sphincter. By blunt dissection expose the prostate, open its capsule transversely. Now place the retractors within the capsule.

By traction from below and depression from above the prostate can be brought within easy reach and enucleated. No effort is made to save the posterior part of the prostatic urethra, but the bladder walls are not damaged.

Six cases with favorable results are reported.

A New Combined Electro-Cautery Incisor for the Bottini Operation.—YOUNG (*Bul. Johns Hopkins Hosp.*, February and March, 1902).—It is in the small sclerotic prostates and those of patients too old and too feeble to safely undergo the shock of a satisfactory prostatectomy that the Bottini operation has achieved really wonderful results. The Freudenberg instrument has some objectionable features which the author has overcome in his modification. Owing to the wide angle at which the beak meets the shaft in the former, when one is pulling against the prostate the beak of the instrument will often slip into the deep urethra without the operator perceiving it and do damage there of a serious nature. This defect has been overcome by making the angle nearer a right angle. In the Freudenberg instrument the handle often becomes so hot that it sometimes prevents the operator from turning the contact screw to break the current. This is overcome by giving a broader contact surface at the connection. As prostatic obstructions differ in size it is unreasonable to make the same size groove in all of them—the same size for a large projection as for a small one. To meet these requirements, Young has had constructed four blades for his instrument with different length beaks.

The prostates should be studied and incised intelligently. To make the same incisions in every case will lead to disappointing results. But, as a rule, the usual three incisions—one posterior and two lateral—are entirely sufficient for most cases. However, exceptional cases must have exceptional incisions.

A Case of Double Urethra.—DUHOT (*Ann. des Maladies des Organ. Genito-Urin.*, January, 1902).—Two canals are observed, one opening at the end of the glans penis and the other terminating just behind the corona glandis in the median line on the dorsum of the organ. While the former is the true urethra opening into the bladder, the latter has a blind proximal ending. It admits a No. 8 F. bougie for one and one-half centimeters, then only a filiform for nine centimeters.

The author has collected nineteen other cases, in some of which both canals connect with the bladder.

The extra urethra in this case was obliterated, not by excision of the canal, but by electrolysis. This was accomplished without in any way interfering with erection.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Remarks Upon the Micro-Bacillus of Seborrhea (Sabouraud)—Preliminary Report Upon an Examination of the Sebaceous Secretions of the Nose.—JAY F. SCHAMBERG, A. B., M. D. (*Jour. Cut. and Genito-Urinary Diseases*, March, 1902).—In 1894 Unna, Engman and Hodara described a minute bacillus which they found constantly in comedones and regarded by them as the cause of blackheads and acne.

Sabouraud subsequently made an elaborate study of this bacillus, which he designates as the micro-bacillus of seborrhea. He likewise regards this organism as an accessory and at times the exciting cause of acne, and the cause of true baldness.

About a year ago the author, while examining the sebum from the sebaceous follicles of the nose, noticed an organism therein which was apparently identical with that described by Unna and his confreres. On looking up the subject he noticed that Sabouraud had previously noted its presence in the follicles of this region and had remarked upon the identity of this organism with that of Unna, Engman and Hodara. In order to determine its frequency Dr. Schamberg examined fifty subjects; some perfectly healthy individuals and others suffering from various cutaneous diseases. A little sebum was squeezed out from the nasal follicles, spread between two coverslips and stained with Loeffler's methylene blue and gentian violet. The condition of the skin, whether oily or dry, was noted in each case. The bacilli were present in forty-five cases and absent in five; they were present, therefore, in ninety per cent. of the patients examined:

27	positive cases, skin oily.
16	“ “ “ dry.
2	not determined.
<hr/>	
45	
3	negative cases, skin dry.
2	“ “ “ oily.
<hr/>	
5	

The bacilli were present in masses of thousands and represented practically pure cultures.

Efforts of the author to artificially cultivate them failed, but Sabouraud succeeded upon special media, after fifteen months, of experimentation.

Seborrhea, acne, ordinary baldness and alopecia areata, are, according to Sabouraud, produced by the same germ, this "micro-bacillus." What is it that causes the germ to produce one affection in one individual and another disease in another? Why should alopecia areata occur in one patient and progressive baldness in another? Why should young women suffer from acne and not from baldness? It would seem the easiest matter in the world for the micro-bacilli to be transplanted from the face to the scalp. It is to be presumed the answer is that the soil determines whether the germ shall grow, flourish or produce its pathogenic results in one region or another. The author is of the opinion that the micro-bacillus described by Unna and his pupils and Sabouraud, may be found in the sebaceous follicles of the nose and perhaps elsewhere, in ninety per cent. or more of adults. Sabouraud would doubtless reply that almost everyone suffers from seborrhea of the nose. If the presence of vermiform sebaceous filaments in the skin constitute seborrhea, then this statement is true. It may be well, however, to call attention, that in sixteen of the individuals in whom micro-bacilli were found, the skin of the nose, at the time of examination, was dry and not oily. If micro-bacilli are present in millions in the sebaceous glands of the nose of nearly all adults, it is not surprising that they should constantly be found in comedones and frequently in the hair follicles of the scalp.

Are all individuals in whom micro-bacilli are found protected against acne, baldness and alopecia areata by reason of the fact that they present an unfavorable soil for the growth and development of this bacillus? If this were true, it would indicate that only a very small percentage of the carriers or hosts of this organism were susceptible to its ravages. Moreover, the vast majority of people, in addition to this minute bacillus, have staphylococci present upon the skin. They have, therefore, both of the germs which determine an acne. If they are protected by the absence of favorable soil, then the general predisposing causes of acne are of preponderating importance, and the presence of the exciting organisms of secondary significance.

Skin Eruptions in Malaria, With the Report of a Case of Urticaria.—DAVID RIESMAN, M. D. (*American Medicine*, March 22, 1902).—Although malaria can-

not be classed as an eruptive fever, skin changes are by no means infrequent; the best known is herpes. From the author's experience it occurs probably in not quite half the cases. The favorite seats of the herpetic eruption are the lips, wings of the nose, the cheeks, and the eyelids. It may occur on the cornea, tongue, and is more common in malaria than any other disease except pneumonia. The author also considers the presence of herpes of particular value in the differential diagnosis between malaria and typhoid fever and in cases of obscure coma. Furthermore, there is a difference between malarial herpes and that of ordinary colds, the former being more in clusters and abundant.

Next in frequency to herpes in malaria is urticaria, but it is, however, a rare occurrence, as in a great many cases observed during three summers only two with urticaria occurred.

One of these cases presented a profuse eruption of urticarial wheals over the entire body during the hot stage. The tertian parasite was found in the blood. No quinine was given before the eruption.

The following conclusions are presented from the author's observation and the study of the literature:

1. Skin eruptions are not rare in malarial affections.
2. The most frequent are herpes and urticaria.
3. Neither of these present any specific characters.
4. Both may occur in any stage of the malarial paroxysm, although urticaria is most frequent in the febrile, and herpes in the sweating stage.
5. In obscure cases, herpes and urticaria, especially the former, may have considerable diagnostic value.
6. Three types of urticaria are recognizable: That accompanying the paroxysm, usually the febrile stage; that taking the place of the chill; that substituting the entire paroxysm.
7. In their appearances these three do not differ among themselves, nor from urticaria due to other causes.
8. In cases of urticaria of obscure etiology, the blood should be examined for plasmodia. Whether found or not, quinine is worthy of trial.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

Latent Frontal Sinuitis.—SHAMBAUGH (*American Journal Medical Sciences*, March, 1902).—The inflammatory diseases of the frontal sinus may be either manifest or latent. Under manifest are included all those cases which produce symptoms which point unmistakably to involvement of the sinus. These conditions have been long understood. Aside from these comparatively rare cases of manifest frontal sinuitis, there exist a far greater number of cases where the disease produces no outward or manifest symptoms, and where the only abnormal conditions are the secondary changes produced by the pus when it is discharged into the nose, with perhaps a few uncertain subjective symptoms. This so-called latent sinuitis passes often not only unrecognized but unsuspected. The detection and differential diagnosis of this condition is distinctly an achievement of modern rhinology.

Latent frontal sinuitis often lasts over a period of many years with longer or shorter intervals, when an acute exacerbation of the trouble produces symptoms which, while they do not point positively to disease of the sinus, at least should

lead one to suspect the condition. Among these symptoms frontal headache is the most constant. This is sometimes only a dull, heavy feeling or sensation of pressure, sometimes of a more severe throbbing character. More characteristic is an intermittent type of frontal headache, coming on in the morning and disappearing toward the middle of the day only to return the next morning at the same hour. The character and location, just above the orbit, have often led to a mistaken diagnosis of supraorbital neuralgia. Of great diagnostic importance is tenderness on pressure, often felt over the affected sinus; but this is not a positive sign, as pain may be elicited over a normal sinus.

In cases of long-standing empyema of the frontal sinus, secondary degenerative changes of the mucous membrane are often found about the orifice of the fronto-nasal duct. The anterior end of the middle turbinate is frequently found in a state of polypoid degeneration, and a point opposite on the septum, and the mucous membrane of middle meatus, undergoing a similar change. These secondary changes should lead one to suspect frontal sinus disease. It is not possible to base a diagnosis upon their presence, as disease of the antrum and anterior ethmoid cells may produce the same changes. The final diagnosis of frontal sinusitis must rest upon the actual demonstration of pus in the sinus. In cases where the middle meatus is free from polyps, and where the middle turbinate does not interfere, a small catheter can be passed into the sinus, but in most cases this is obstructed by the middle turbinate or polyps. The next step is to remove the polyps and anterior end of the middle turbinate. This is done with a cold snare or by means of Hartmann's conchotome. With the middle meatus free there are three methods of determining pus in the frontal sinus: 1. Introducing a catheter into the sinus through its natural opening in the nose, and washing out the pus. 2. Diagnosis by exclusion—demonstrating the pus in the anterior ethmoid cells by washing them out through their natural openings, or by puncturing with a trochar. 3. Making an exploratory puncture in the frontal sinus through the nose, as some advocate, or opening from without. The author considers the former a dangerous procedure, and when necessary would resort to the latter, though this is rarely called for.

Clinical Studies on the Value and Uses of Intubation.—KURT NOESSKE (*Sammlung Klinischer Vorträge*, No. 324).—The author in a very comprehensive article discusses in detail the indications and contra-indications of intubation and tracheotomy. In comparing intubation with tracheotomy he says that the former should not be looked at as a measure that should entirely supplant the latter, but that tracheotomy should be resorted to only when some special indication calls for it; as when the obstruction is known to be below the reach of an intubation tube, or when intubation fails to relieve the condition. Special stress is laid on the danger of decubitus of the larynx following the use of the intubation tube, if left in position too long, and he states that the tube ought to be removed at least once in every twenty-four hours, in order to allow a return of the circulation to the part. In his experience decubitus was never very extensive nor appeared any more often than decubitus of the trachea from a tracheotomy tube.

As a rule intubation must be reserved for hospitals, or when trained assistants are constantly at hand, while in general practice it can be successfully used in an emergency and tide the patient over a critical period. The author believes that more than half of all the stenoses of the larynx following diphtheria can be successfully relieved by intubation, and specially notes that this true in many of the severe cases, as well as the lighter forms. Special stress is also laid on the early relief of the stenosis in diphtheria, on the ground that the child will have to combat, not only the toxemia produced by the Loeffler bacilli, but a carbonic acid gas intoxication as well. He concludes by stating that we have in intubation a quick and relatively easy, conserving, if not an indifferent, substitute for a bloody operation (tracheotomy) that is not always free from danger and which has many drawbacks.

The Treatment of Chronic Suppuration of the Middle Ear and Mastoid Antrum.—WILLIAMS (*St. Paul Medical Journal*, March, 1902).—The author gives a brief description of the diseased conditions which may be found, and calls attention to the fact that the mere profuseness of the discharge forms no index as to the probability of a dangerous extension, nor that, on the other hand, does the paucity of secretion indicate a lessened liability to cerebral and other complications. Some of the most dangerous cases are those in which the discharge, when in evidence at all, is insignificant in amount, perhaps periodical in its appearance and frequently considered unimportant. Cases may go on from twenty to forty years before the inevitable end is ushered in. Death occurs either as the result of an intracranial abscess and its sequel—purulent lepto-meningitis—or invasion of a sinus with general septic infection (particularly abscesses of the lung or liver), or erosion of the carotid canal and artery, death following from hemorrhage. The situation of the intracranial lesion is ordinarily on the side of the diseased ear, but not always; for an abscess may form in any part of the brain as a result of disease of the middle ear.

For the sake of definiteness the writer divides the treatment of chronic suppuration of the middle ear into temporizing and radical measures. Much may be done in the way of temporizing, as a certain number of cases can be cured by the measures usually advocated: first and most important of which is simple cleanliness; next the destruction of granulation and polypoid tissue (which may be accomplished in various ways, by the snare, cutting forceps or chemical agents). A mixture of chromic acid crystals with pipe clay in such proportions as the surgeon may desire, presents, according to the author, an ideal form for the use of that drug, and is to be preferred to any other form of medicinal application when small polypi or granulation masses are to be destroyed. Solutions of nitrate of silver in water or alcohol, or boric acid in alcohol, may be instilled. He doubts the curative virtue of boric acid and condemns the usual method of treatment by boric acid insufflation. A case that resists conscientious and thorough cleansing with judicious use of nitrate of silver and chromic acid, together with such mechanical measures as may be indicated for removal of larger polypi, will not be bettered by the numerous medicines that have been recommended. He proposes for every case of persistent otorrhea the opening of the mastoid antrum and adjacent cells, with or without the more complete Staaeke (radical mastoid) operation. A detailed description of the operation is given, and he concludes by stating that when properly done the operation is not a dangerous one, as he has never known of a fatal result due to the operation, while on the contrary a chronic otorrhea is a never-absent menace to life.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

A Contribution to the Problem of the Occurrence of Ocular Syphilis in the Third Generation.—STRZEMINSKI (*Von Graefe's Arch. fuer Ophthalm.*, liii. Band, 2 Heft, December 17, 1901).—Opinions vary as to the occurrence of the disease in the offspring of a parent the victim of hereditary syphilis, certain authorities (Tarnowsky, Finger) affirming the inheritance, not of the disease, but of certain characteristic "dystrophies," while others (Jullien, Hallopeau, Boeck) believe that the disease itself, albeit in somewhat attenuated form, is transmitted. E. Fournier noted nineteen cases of ocular defect in sixty-three children, one or both of whose parents were hereditary syphilitics. Strzeminski is of the opinion that the disease does occur in the third generation, and that its victims are char-

acterized by mental and physical deficiency. Autopsies on children of hereditary syphilitics do not exhibit a picture typical of the disease, but merely general organic and tissue atrophy. These children are often in sound health up to the second year, when, without apparent cause, they grow pale and thin and their future mental and physical development is notably retarded.

The diagnosis of hereditary syphilis in the second generation is very difficult, as the following conditions must absolutely be fulfilled: (1) Positive exclusion of acquired syphilis in the parents; (2) positive knowledge of acquired syphilis in one of the grandparents; (3) exclusion of the possibility of extragenital infection of the patient. These conditions are thought to be fulfilled in the following case:

Male, twelve years old, presented the general physical signs of an hereditary syphilis. The right eye was involved in a typical interstitial keratitis, accompanied by a moderate iritis, with a delicate reticulated exudate in the pupillary area. With the ophthalmoscope the temporal half of the disk was studded with fine pigmented points, and the nasal border encircled by a pigment ring. Throughout the fundus periphery were scattered numerous small, roundish, or irregular pigment flecks, similar to the pigmentation of a retinitis pigmentosa. In the left eye the macula was surrounded by numerous small, round, sharply circumscribed yellowish-red spots, bordered by pigment (areolar retino-choroiditis), while the periphery of the fundus showed general atrophy of the retinal pigment. The latter condition is found in old people, and when occurring in the eyes of syphilitics has been designated by Antonelli "*Senilisme precoce du fond de l'oeil*." The temporal half of the disk was surrounded by a pigment ring which merged imperceptibly into the rather greyish retina.

The patient's father presented the general physical characters of an hereditary syphilitic, and showed evidence in his cornea of an earlier interstitial inflammation. Ophthalmoscopically there appeared in the neighborhood of the macula numerous whitish areas, surrounded by pigment, which were the expression of the atrophic stage of a retino-choroiditis.

The grandfather of the patient contracted syphilis and married during the full bloom of the disease; he received no treatment until after marriage. His wife was pregnant six times, miscarried three times. Of the children born at term, two died in infancy, the sole survivor being the father of the patient.

A vigorous mercurial treatment, alternating with potassium iodide, resulted finally in complete recovery, although the fellow eye became involved shortly after the beginning of the treatment. Three similar cases are briefly reviewed. The writer concludes in part as follows: Infantile mortality in syphilis of the third generation is lower than in simple hereditary syphilis. Some children present various dystrophies, or, after a year or so, become weakly and their mental and physical development is retarded. Ocular syphilis of the third generation is strikingly similar to that of the second generation. The course of the disease is shorter, however, and readily amenable to treatment.

Corneal Lesions in Acquired Syphilis.—W. H. WILDER (*Jour. Am. Med. Assn.*, December 31, 1901).—Mooren, Panas, and Perrin affirm that corneal lesions do not occur in acquired syphilis. Wilder, on the contrary, believes that the disease is responsible for certain deep-seated inflammations of the cornea, and reports three cases where the etiologic connection seems indubitable.

CASE I.—Male, colored, twenty-seven years old, presented himself with a triangular area of infiltration at the upper limbus corneae of the right eye. The opacity consisted of small, deeply-seated foci between which the corneal stroma was somewhat cloudy. There was no roughening of the corneal epithelium. The iris was sluggish, but dilated evenly under atropine. A definite history of syphilitic infection (eleven months previously) was elicited and examination showed enlarged superficial glands and pigmentation of the skin of the trunk:

resulting from an earlier rash. Under atropine, hot applications, and potassium iodide internally the cornea cleared completely.

CASE II.—Female, thirty-four years, married, gave a history of rheumatic pains, loss of hair, rash and sore throat, followed by two miscarriages. In the upper portion of the cornea was a deep opacity consisting of dense spots of infiltration between which the tissue appeared somewhat hazy. V: $\frac{2}{40}$. The fellow eye was normal. The posterior cervical glands were enlarged and indurated. In spite of vigorous treatment with potassium iodide the infiltration became more dense and invaded the center of the cornea, vision becoming reduced to $\frac{1}{200}$. After two weeks the condition began slowly to improve and the eventual outcome was excellent with V: $\frac{2}{30}$.

CASE III.—Male, twenty-six, complained of a continual sense of discomfort in the right eye. Examination revealed a half-dozen yellowish-gray spots 1 to 1.5 mm. in diameter lying in the deeper layers of the cornea. Covering two of the spots was a small vesicle containing colorless fluid. The left cornea was normal. A positive history of luetic infection fifteen months previously, followed five months later by inflammation of the right eye (iritis) was obtained. Under atropine and antisyphilitic remedies the ocular condition at once improved and recovery was complete at the end of three weeks.

CONCLUSIONS.—In acquired syphilis a keratitis may occur at any period from the early secondary to the late tertiary. The course of the disease is milder and shorter than the course of the keratitis of hereditary lues. Distinguishing characters are the large dense areas of infiltration, with but little vascularization, and the tendency to involve one eye only. The disease may assume a punctate form, and may or may not be associated with uveitis. There is apt to be comparatively little ultimate injury to the cornea, as the infiltration is removed before the occurrence of permanent opacification. Active antisyphilitic treatment is indicated.

The Eye Defects Which May Cause Apparent Mental Dullness and Deficiency in Children.—C. S. BULL (*Pediatrics*, February 15, 1902).—Hypermetropia gives rise to ocular pain, headache, and a sense of fatigue in the brain, symptoms incident to weakness of the convergence power. With correction of the error of refraction, dullness and stupidity as well as the subjective symptoms disappear.

Astigmatism is productive of indistinct vision for both distance and near, and may be an etiologic factor in the production of various neuroses, and even of epileptiform attacks in susceptible individuals.

Myopia, the outcome of vicious methods of school hygiene, results in the child withdrawing from the companionship of his fellows, thus tending to become morbid and introspective. Appropriate glasses at once enable him to view the world as do his normal-sighted companions, and the supposed mental dullness vanishes magically.

Insufficiencies of the ocular muscles give rise to headache, a sense of strain in the eyes, vertigo, mental confusion, and occasionally diplopia. Prolonged near work of any kind is practically out of the question. In such cases the child's slowness to learn is frequently ascribed to mental ineptitude.

Congenital cataract, dislocation of the lens, absence of pigment in the uveal tract (albinism), coloboma of the iris and choroid, and aniridia are among the rarer ocular defects which may cause apparent mental dullness in some children.

Recently Hinshelwood and Nettleship have reported cases of congenital word-blindness in which there is absolute or relative inability to learn to read. The condition is probably not very infrequent, and the possibility of its occurrence should always be borne in mind by the ophthalmic practitioner. Changes in the left supra-marginal convolution and angular gyrus have been found.

BOOK REVIEWS.

THE JOURNAL OF OBSTETRICS AND GYNECOLOGY OF THE BRITISH EMPIRE. Vol. I, No. 1. Publishers: Bailliere, Tindall & Cox. London. Annual subscriptions, 25 shillings.

This publication aims to be a complete and impartial record of British work in obstetrics and gynecology and a summary of contemporary thought and achievement in these specialties throughout the world. Whilst the original contributions will be the work of British authorities, considerable space will be devoted to abstracts of the writings of foreign obstetricians and gynecologists. A glance over the list of editors of this journal, containing the names of Alban Doran, Sinclair, Cullingworth, Herman and a score of other distinguished gentlemen, cannot but assure the subscriber of much interesting reading for the coming year. The first number contains articles from the pen of Ch. J. Cullingworth, Peter Horrocks, Berry Hart, Sinclair, Murdoch Cameron and Arnold W. W. Lee. We extend to the new publication our heartiest congratulations.

WUERZBURGER ABHANDLUNGEN AUS DEM GESAMMTGEBIET DER PRACTISCHEN MEDIZIN. Herausgegeben von Docent Dr. J. MUELLER und PROFESSOR OTTO SEIFERT. A. Stuber's Verlag in Wuerzburg. 1901. G. E. Stechert, New York, Agent. Price per volume containing 12 numbers, Marks, 7.50.

The intention of the editors is to give in each number a critical review of the latest progress in a certain medical problem. Each number forms a separate essay written by a recognized authority. We can heartily recommend these treatises to the busy practitioner who cannot devote much time to reading and who is anxious to keep his knowledge up to date. No. 1 of the second volume of this publication contains a paper of Professor Otto von Franque on "Etiology and Treatment of Rupture of the Uterus." In No. 2 Docent Dr. Roemer deals with the "Significance of Bacteriology in the Pathology of the Eye." No. 3 is an exhaustive expose of the "Treatment of the Malpositions of the Uterus." No. 4 is written by Dr. von Boltensern. It gives a complete critical review of all the many devices of a "Non-Surgical Treatment of Malignant Growths." The last number out, No. 5, is an essay of Dr. J. H. Spiegelberg on the "Etiology and Treatment of Convulsions in Children."

A MANUAL OF OBSTETRICAL TECHNIQUE AS APPLIED TO PRIVATE PRACTICE, WITH A CHAPTER ON ABORTION, PREMATURE LABOR AND CURETTAGE. By JOSEPH BROWN COOKE, M. D., Visiting Obstetrician to the New York Maternity Hospital, Blackwell's Island. Illustrated. Third edition. Philadelphia and London: J. B. Lippincott Co. 1902.

This book is intended for the young physician, beginning "the struggle against the adverse conditions so constantly encountered in the ordinary practice of midwifery." Therefore the writer entirely eliminates the "hospital idea" from his little work and limits himself to an account of the methods which he found the most practicable in private practice. He gives in 169 pages a great amount of excellent advice and shows, especially in details, his thorough familiarity with the subject. Nineteen plates made from photographs greatly elucidate the text. We have only words of praise for those chapters of the book which deal with technicalities. Where the author approaches theoretical questions his deductions become, on account of his desire to be short, somewhat unclear. We do not think that, for instance, the author's opinion in regard to the interruption of pregnancy, as expressed on pages 28 and 55, will offer any help to the "beginner," for

whom the book is written. If the advantages of the Walcher position are praised as increasing the length of the true conjugate (page 113), some space should be devoted to the statement that at the same time the length of the conjugate of the outlet is diminished—*i. e.*, in a case of forceps delivery the patient should be brought back in the normal lithotomy position as soon as the head has passed the brim of the pelvis.

As a whole, this little volume is heartily to be commended.

DIE CHEMISCHE CONSTITUTION DES GEHIRNS DES MENSCHENS UND DER THIERS.
(The Chemical Constitution of Human and Animal Brains.) By J. LUDWIG W. THUDICHUM, M. D., F. R. C. S. Price, \$2.50. Franz Pietzcker, Tübingen. 1901. G. E. Stechert, New York.

This is a valuable contribution of the subject, the most valuable which we have. It is based upon the author's own researches in this field. In addition there has been collected and critically discussed all the work of any note which has been done by other workers. The standpoint of the author, as expressed in the introduction, is based upon the infallibility of chemical method. This forms the keynote of the whole investigation. In order that this should have any permanent value, the old errors, which have become almost permanent, must be done away with, and the false facts must be laid aside. A work of this kind is, of course, likely to be read by those only who have an adequate knowledge of chemistry and of chemical method, so that the author's painstaking investigations can be followed. But even to those in whom this knowledge is lacking, and to whom the subject appeals more from its clinical side, this work will remain a source-book of information, which will be frequently referred to. No praise is too high for the remarkable scientific care and earnestness, and the just consideration of the work of others which the author has shown in the preparation of this work. It takes its place as a classic in a field which will, in all probability, be the future source of the solution of many of the problems which are now puzzling the workers in psychiatry and neurology.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, etc. Edited by HENRY W. CATTELL, A. M., M. D., of Philadelphia, with the collaboration of John B. Murphy, M. D., of Chicago; Alexander D. Blackader, M. D., of Montreal; H. C. Wood, M. D., of Philadelphia; T. M. Rotch, M. D., of Boston; E. Landolt, M. D., of Paris; Thomas G. Morton, M. D., and Charles H. Reed, M. D., of Philadelphia; J. W. Ballantyne, M. D., of Edinburgh, and John Harold, M. D., of London. Volume IV. Eleventh series. Philadelphia: J. B. Lippincott Co. 1902. Price, cloth, \$2.00 each; half leather, \$2.25 each.

This volume contains some very interesting features. There are usually found in volumes of this series articles which seem to be published nowhere else. Of special note may be mentioned the opening article by A. Jacobi on "Strychnine." The section on neurology contains an article by Marinesco, on "Myelitis." This is a further presentation of his views on this subject, which he expressed in a paper read before the International Congress at Paris in 1900. "Types of Hemiplegia," by G. L. Walton, is of value as bringing out some rare forms of this condition. These rare forms are being more and more recognized. The form of hemiplegia produced by cortical or subcortical lesions, causing disturbances in the astereognostic sense, is illustrated by a number of cases. A more detailed account of the various articles cannot be given without doing an injustice

to some of them, which, for lack of space, would have to be omitted. Attention is, however, called to the concluding article on "Methods of Keeping Case Records in Private Practice." A number of prominent physicians in various specialties contribute their views on this subject, and it contains some worthy hints in regard to this, at times, so puzzling a question. This volume can be fairly said to be very readable, as it contains a class of articles especially adapted to those whose interest in medicine is mostly clinical.

PSYCHOPATHIA SEXUALIS. With Special Reference to Antipathic Sexual Instinct. A Medico-Forensic Study. By Dr. R. V. KRAFFT-EBING. The only authorized Translation of the Tenth German Edition. By F. J. Rebman. 8vo, pp. 585. Chicago: W. T. Keener & Co., 90 Wabash avenue. 1901. Price, \$5.00, net.

This is an authorized translation of the tenth German edition by F. J. Rebman. This classic treatise by the well-known Vienna authority is too widely read and has been too often discussed to need special mention here. The work of the translator has been well done, and the English is certainly an advance upon the usual style which we are accustomed to meet with in English editions of German text-books. After all, there is a grave question whether an additional translation was required; not that its need among physicians might not be felt, but that its circulation among non-medical readers might, in this way, be increased. A work of this kind has only a limited value, and it is questionable whether its appearance in many new editions best serves the purpose of its writer. This purpose, after all, is to give aid to those whose work now and then touches upon people of the class described in this work. If, however, it is conceded that a wider knowledge of the psychopathic side of sexual life is of value beyond the physicians' limits, then it is better to have a translation which is accurate and painstaking than one which is neither. The former this latest edition certainly is, and for this and its make-up, in print, paper, and binding, there is nothing but praise. Inasmuch as there is evidence of a renewed interest in the matters touched upon in this book, the appearance of a good, up-to-date translation of this most widely known of works of this class must be recognized as opportune.

THE STANDARD MEDICAL DIRECTORY OF NORTH AMERICA, Consisting of Twelve Parts, Including Directory of Physicians of North America, Medical Colleges, Medical Service of the United States, Medical Societies, Medical Practice Acts, Medical Publications (Including Books and Periodicals), Mineral Springs, Drugs and Medicines, Medical and Surgical Products, Manufacturers and Life Insurance Companies. Handsomely bound in red buckram, 824 pages, imperial octavo. Price, \$10.00. G. P. Engelhard & Co., Chicago.

We welcome this volume both for reason that it appears to be a valuable directory, and on account of the assurance given that in future this field will not be monopolized by Polk's Medical Directory. The latter work has been invaluable, but the competition between rival publishers will result in more valuable and comprehensive future editions of both directories. The Standard Medical Directory is in many respects a distinct advance over similar publications. It is divided into twelve parts, each complete in itself and covering respectively medical Colleges, Directory of Physicians of North America, Medical Service of the United States, Medical Societies, Medical Laws, etc., Medical Publications and Libraries, Hospitals, Mineral Springs, Drugs and Medicine, Medical and Surgical Products, Manufacturers and Life Insurance Companies.

ARZNEIVERORDNUNGEN IN DER KINDERPRAXIS. Dritte Auflage. Verlag von S. Karger, Berlin. G. E. Stechert, 9 E. Sixteenth street, New York. Price, 70 cts.

This is a small manual which can be readily carried in the coat-pocket, and contains the indications for the use of drugs and remedial agents in the cure of children's diseases. It also contains the dose and formulary of drugs. The price of the drug is also mentioned.

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ORIGINAL ARTICLES.

MUCO-MEMBRANOUS COLITIS IN CHILDREN (MUCOUS DISEASE, EUSTACE SMITH'S DISEASE), WITH REPORT OF TWO CASES.

BY JOHN ZAHORSKY, M. D., of St. Louis.

I.

In the study of muco-membranous colitis in children the first striking singularity that presents itself is the scanty recognition which this disorder has received from writers on pediatrics. Very few of the modern text-books on diseases of children give any space to it; some not even giving it a mention. Keating's Cyclopaedia, the American text-book, and Taylor and Wells are the only works which, to my knowledge, reserve a special section for the consideration of this subject. Even these articles treat the disease more particularly on the authority of Eustace Smith. It is evident that very few typical cases have been reported since this author described the affection. Many recent writers ignore the subject entirely, having never seen a case which they believed should be separately classified from other forms of chronic follicular colitis.

The assumption, then, is justified that at present our knowledge of mucous disease is enveloped somewhat in obscurity and contradictions.

In order to clarify this subject to some extent, a brief study of the literature will be analyzed.

Eustace Smith¹ was the first to describe an affection of childhood under the name of mucous disease. Contrary to the opinion of all later writers, he regarded this disease as frequent among children. He claimed that it occurred between the ages of three and twelve years, and that pathologically it was a mucous flux. The little patient becomes languid, dull and disinclined to exertion. The child is depressed and declares that he is tired and weary. He ceases to take an interest in his common amusements, is irritable and has frequent crying paroxysms. It is noticed that the patient is pale, and is beginning to lose in flesh, although emaciation is never extreme. Drowsiness in day time is succeeded by wakefulness and restlessness at night. The child grinds his teeth and has night cries. The appetite is capricious. The tongue is flabby, indented at the edges by the teeth and covered by a very characteristic coat. This is a shiny, glossy white coat, and is produced by the excessive secretion of mucus in the mouth. The most singular symptoms are referable to the intestines. The child is usually constipated, or there are frequent scanty stools containing large quantities of free mucus. The hardened scybalaë are often coated with a membrane of mucus. Mucous shreds, strings, and casts of the bowel may be passed. Occasionally the constipation and

diarrhea alternate. After two or three weeks of obstipation, diarrhea supervenes accompanied by griping pains and the passage of enormous quantities of mucus. The patient complains of headache, pain in the chest or stomach, but most frequently colicky pains in the abdomen. There is no elevation of temperature, and the disease is very intractable.

Such, in brief, is the picture of this disease as described by Eustace Smith. In searching the literature, cases which resemble this clinical picture are given under the name of membranous colitis or mucous colitis.

It should be remembered, however, that the clinical picture which Smith has drawn is by no means sharply defined. Cases of chronic entero-colitis, chronic dysentery and even constipation may be included under that heading.

Several forms of membranous diarrhea have been reported which must be excluded from this category. Thus, Fruitnight² reported a case of scurvy in a child. The patient was very constipated, and after a movement was procured a cast of the bowel was passed. This was red in color and contained fibrin and red blood corpuscles. It was probably due to hemorrhage into the bowel, as sometimes happens in scurvy.

Holt³ describes an acute membranous ileocolitis occurring among children, which differs materially from that seen in adults, or from Eustace Smith's disease. This affection usually runs a short course, and is associated with severe general symptoms—fever, prostration. It is fatal, as a rule, in eight or ten days, and when recovery follows it is only after a protracted illness. The gross and microscopic appearances are also utterly different from mucous colitis.

Douglas⁴ gives the histories of three cases occurring in infants. These were probably due to some infective agent and cannot be classed with the disease under consideration.

These cases demonstrate that infective and secondary forms of membranous enteritis may occur, and in all cases of mucous colitis it is necessary to bear these special varieties in mind.

The actual number of cases of muco-membranous enteritis reported in children are so few that it is almost impossible to draw any definite conclusions from them.

Edwards,⁵ in an excellent article, refers to several cases which have been reported as occurring in children. He refers to cases reported by Chapin,⁶ others by Smith,⁷ Clemens,⁸ and Whitehead.⁹

Fields¹⁰ referred to several cases which have been placed on record.

Westphalen,¹¹ in an extensive study of mucous colitis and membranous enteritis, only refers to the rare cases as they occur in children. He mentions cases reported by Longuet, Ulman,¹² and Lowenstein.¹³

Finally, Koplik¹⁴ discusses this subject; at the same time he lays stress on the fact that the disease is overlooked and that it is very intractable in treatment. He also briefly reports two or three cases.

Now, this seems to be about the whole number which I have been able to glean in the literature accessible to me. Apparently, then, it is a rare disease. This contrasts very strikingly with Eustace Smith's statement that it is a frequent disorder. No doubt, practitioners overlook these cases. The most prominent symptom is the constipation, and such is the usual diagnosis. When more or less looseness of the bowels is present the diagnosis of chronic dysentery or chronic diarrhea will be made.

Two cases have been under my care in the last year, a short report of which is hereby given. These cases show individual peculiarities, and while the first was an undoubted case of mucous colitis, there is some question as to the latter.

CASE 1.—In June, 1901, I was consulted by a mother in regard to her daughter, four years of age. It was stated that the patient suffered from persistent constipation.

The mother lived in a country town. Both parents are healthy. The patient is the only child. She was nursed until about eight months old, and then given cow's milk and later given a general but judicious diet. She had several attacks of diarrhea during the second year of her life, and following this had been more and more constipated. She was treated by several physicians. A carefully regulated diet had been prescribed. A great many different kinds of laxatives and purgatives had been given, but with only temporary benefit. Following the administration of the purgatives she not infrequently had diarrhea. At times when the mother would not use measures to produce an evacuation, she would have attacks of illness which the mother described as "bilious" attacks. She rarely had fever.

Examination of the patient disclosed little that threw any light on the cause of the constipation. The child was well nourished, looked bright, vivacious, and was very active in her movements. No abnormality was found in chest. The abdomen was not distended and not tender. The liver and spleen were perfectly normal in size. No dilatation of the stomach or intestines could be discovered.

The child was first seen in my office, and I asked the mother to give the patient a laxative that night and an enema in the morning. Then she should save the stool, and I would call at her temporary residence and examine it.

Examination of the stool revealed the disease under consideration. A very large fecal movement mixed with water was found. The feces were composed of hard, scybalous masses, and nearly all coated with a grayish-white, semi-transparent membrane. Large masses of mucus were also present. The membrane, while retaining its shape, could be easily torn.

Diagnosis.—Eustace Smith's mucous disease.

I was aware that the prognosis in these cases is usually given as very uncertain. In fact, Koplik, in his recent article, states that he has "not succeeded in completely curing the main condition at fault in these cases." The condition has been said to be very similar, if not identical, to the chronic membranous enteritis in adults, which, as is well known, is very resistant to therapeutic measures.

In regard to the diet, I ordered an exclusion of fats and cereals. In fact, gave a light diet which contained no indigestible residues. I treated the case just contrary to the rules given for constipation. The food consisted of skimmed milk, egg, meat broths of all kinds, fish, and soups. The only cereal allowed was stale bread.

I first adopted the alkaline treatment of Eustace Smith, by giving large doses of bicarbonate of soda, but added papoid. For the constipation small cold water enemata were ordered. No laxative was given by the mouth except the soda.

After two weeks there was marked improvement, but still not all that could be desired. Constipation persisted.

The acid treatment was then employed. Dilute sulphuric acid and fluid extract of hydrastis were given for two weeks. While all this greatly ameliorated the condition the cure was incomplete. The odor of the breath was still offensive, and the bowels constipated.

Then I concluded to try arsenic, since this drug had been highly recommended in the membranous colitis of adults.

Fowler's solution in gradually increasing doses was prescribed. The cold water enemata were used daily.

From this time improvement was uninterrupted. In six weeks the tongue was clean, the breath sweet, no mucus was found in the stools. A normal

passage from the bowels was obtained daily without artificial aid. The child seemed cured, and in three months there has been no relapse as far as I know. The mother was directed to administer the arsenic at intervals during the next year.

CASE 2.—L. R., male, aged seven months; was first seen in September, 1900. The patient had been breast-fed during the first few months, then fed at the table, receiving a mixed diet. He had always been healthy except an attack of influenza. In August he was ill with a severe diarrhea which persisted more or less for several weeks. During this time several exacerbations of the disorder occurred, at one of which the mother brought him to the St. John's Dispensary.

Examination revealed a child fairly well nourished, having a slight fever, and, the mother stated, passing numerous slimy stools daily. The patient presented a typical lingua geographica, which persists to this day.

The provisional diagnosis of acute follicular colitis was made and treatment instituted.

Some improvement followed; the child gained in weight, looked well, slept well, but slight looseness of the bowels persisted and defied all remedies. The mother came to the clinic regularly; at each visit she reported that he had about two movements daily, but "so much slime."

In fact, this was the constant complaint, "so much slime." Otherwise, the symptoms fitted the picture drawn by E. Smith. The countenance at the beginning was dusky, the child listless, very nervous in disposition, restless at night, and coated tongue; pain was never pronounced.

For one whole year this child was under treatment. All kinds of remedies were given. Alkalies, acids, digestants and tonics, but the mucus in the stools persisted. Arsenic, also, was administered for a short time.

After a year an improvement was manifested, and to-day he is practically well.

During this year's treatment he had several intercurrent affections, among which tonsilitis, bronchitis, and diphtheria may be mentioned.

II.

Another phase of this study presents itself, and that is the relation of Eustace Smith's diseases to the membranous enteritis of adults. The tenor of some writings on the subject certainly leaves the impression that these diseases are not identical. A comparison of the clinical characters of the mucous colitis of childhood and that of adult life might, therefore, be instructive.

In the first place, it should be remembered that clinicians, following Nothnagel's classification, have attempted to establish two forms of the affection in adults. These varieties were designated by Nothnagel as *colica mucosa* and *enteritis membranacea*. At the Thirteenth International Medical Congress,¹⁵ this subject was discussed by the world's eminent authorities. It is evident from reading the discussion that considerable confusion about this affection existed in the minds of these scientists. Thus Boas insisted that Nothnagel's classification was correct, although his statement relative the clinical characters of the two varieties is by no means clear.

Mannaberg also argued that the two forms must be sharply distinguished. He declared that *colica mucosa* was a very rare affection, in which a paroxysm of severe colic was relieved by the discharge of a large quantity of mucus from the bowel. He claimed that *enteritis membranacea* was an ordinary catarrh, while the mucous form was a neurosis dependent on hysteria and neurasthenia.

Mathieu gave both forms the name of muco-membranous colitis that were caused by obstipation in neurasthenia and hysterical individuals.

Laugenberg distinguished two forms—one accompanied by obstipation, the other by diarrhea.

Ewald insisted that excepting certain secondary varieties, the two forms are probably the same disease.

It gives some feeling of relief to study the article by Westphalen (*loc. cit.*), who discusses the question in an unanswerable way and reports several cases. His conclusions are that the same disease is represented by the terms enteritis membranacea and colica mucosa; in the latter, however, a sensory neurosis is added to the secretory disturbance, as was suggested by Rosenheim. In the former disorder, atonic obstipation, and in the latter spastic obstipation are the prevailing conditions.

I shall regard the affection as one disease having a certain variation in the symptoms. The principal clinical symptoms which admit a comparison are as follows:

1. Constipation.
2. Moderate nutritive disturbance.
3. The passage of mucus, casts, masses and shreds from the bowels.
4. Irregular abdominal pains.
5. Normal temperature.
6. Neurasthenic symptoms.
7. Chronicity and intractability.

A comparison of these characteristics in the adult with those laid down by Eustace Smith, shows that the symptoms collected by the latter are more diversified. But if the clinical signs are carefully classified, the secondary forms of chronic colitis being rejected, as Edwards¹⁶ was compelled to do, a group of symptoms remains which resembles that found in muco-membranous enteritis. The resemblance in the constipation, state of the nutrition, the discharge of mucus, varying abdominal pains, and normal temperature is striking. There are differences, however, though these may be explicable on the ground of the patient's age.

In the first place, while a nervous irritability is common, the symptoms referable to the nervous system are not such that could be designated neurasthenia. At least it would be very difficult to separate the accompanying nervous symptoms from others associated with the common digestive disorders of childhood. Yet, hysteria and neurasthenia are not unknown at this age, and, possibly, in the future a more careful study of the nervous system may bring out some typical signs of the neurosis.

The rarity of neuroses in general at this age may account for the rarity of the affection, but it must not be considered as proven that the pathology of the disease is understood. To designate such an affection as a secretory neurosis does not solve the difficulty.

Another difference is that the disease yields to treatment much more easily in childhood. Koplik, however, has not been very successful. My own case rapidly recovered. At a meeting of the Bethesda Pediatric Society, when this subject was under discussion, Dr. Blair reported that he had cured two cases by the repeated administration of castor oil. E. Smith, also, gives rather a hopeful view of the prognosis.

Altogether, then, the disorder in childhood must be considered identical with that occurring in adults. It has a similar course, shows itself by similar symp-

toms, and probably depends on the same cause. It should, therefore be termed *mucó-membranous colitis*, and the name *mucous disease* should be dropped.

III.

It is hardly necessary to review the many different forms of therapeutic measures that have been offered to overcome this disease. Articles by Thompson¹⁷ and Einhorn¹⁸ deserve reading in this connection.

The dietary regulations are by no means free from contradictory phases. Some authorities hold that bland, unirritating food should be prescribed. Foods containing cellulose and woody fibers should be rejected. All food must be liquid and free from particles. It was argued that undigested residues would irritate the mucous membrane, and consequently increase the mucus. Smith reasoned in this way and, therefore, rejected all farinaceous food.

Von Noorden,¹⁹ on the other hand, declared that a fluid diet is unsuitable; to overcome the constipation a coarse diet should be ordered. Substances containing much cellulose and woody fibers are the proper foods. It would seem, then, that the question of the diet is by no means settled, and each individual case may receive several kinds of diet before a cure is effected.

In regard to medication, nothing specific can be offered. Above all beneficial drugs, castor oil is very conspicuous. It should be given in small doses daily. In my own case, arsenic did the most good, and we find that this drug is recommended by various authorities. The alkaline treatment which Smith recommended did not gather much support. Thompson advocated the administration of nitrate of silver combined with turpentine. Other clinicians have urged the use of intestinal antiseptics and vegetable digestants. Nervines occupy a prominent part in the treatment of this disease, since it is supposed that the primary morbid process is in the nerves.

Most clinicians lay particular stress on rectal injections. All kinds of solutions have been tried. At present the treatment suggested by Kussmaul and Fleiner is generally followed. This is the rectal injections of large quantities of oil. The oil is injected high up into the sigmoid and retained as long as possible.

Of course, general hygienic measures must always be carefully observed.

Conclusions:

1. Mucó-membranous colitis is a rare disease in children.
2. There is no evidence that a special disease exists in children excepting mucó-membranous colitis, to which the name mucous disease may be applied.
3. The pathologic process and clinical history is similar in children and adults.
4. The term mucous disease should be dropped.

BIBLIOGRAPHY.

1. Eustace Smith, *Wasting Diseases of Infants and Children*. Fourth edition.
2. Fruitnight, *Arch. Ped.*, 1899.
3. Holt, *Infancy and Childhood*.
4. Douglas, *Jour. A. Med. Ass.*, August 31, 1901.
5. Edwards, *Amer. Jour. Med. Science*, 1888.
6. Chapin, *Archives Pediatrics*, 1884.
7. J. Lewis Smith, *Text-book*. Fourth edition.
8. Clemens, *Yahrb. f. Kinderheilkunde*, 1860.
9. Whitehead, *Med. & Surg. Rep. Manchester Hosp.*, 1870.
10. Fields, *Fiske Fund Dissertation*, No. xxxvii.
11. Westphalen, *Berl. Klin. Woch.*, 1901. Nos. 14, 15, 16.
12. Ulman, *Deutsch. Med. Woch.*, 1894.
13. Lowenstein, *Deutsch. Med. Woch.*, 1893.
14. Koplik, *Phil. Med. Jour.*, July 3, 1901.
15. Muenchen, *Med. Woch.*, August 21, 1900.
16. Edwards, *Keating's Cyclopedic*.
17. Thompson, *Med. News*, June 2, 1900.
18. Einhorn, *Med. Rec.*, January 28, 1899.
19. Von Noorden, *Zeitschr. f. Prac. Aerzte*, 1898.

REVIEW OF THE PATHOLOGIC ANATOMY OF
AMEBIC DYSENTERY.

BY C. FISCH, M. D., of St. Louis.

Before entering into a description of the pathologic changes occurring in the course of the so-called amebic dysentery, it may be well to call attention to the fact that in this disease we have to deal with a symptom-complex that in its pathologic features stands alone and distinctly differentiated from all of the other inflammatory and ulcerative affections of the intestinal tract; its complications, too, are singular and very peculiar. I have to make this statement on account of the as yet not generally agreed upon etiology of the disease. While a superficial glance at the literature published since Lambl first saw the amebæ in dysenteric stools in 1860, would seem sufficient to assure the conviction of these amebæ as the causative agent, to the careful critic a great number of evidences are as yet not established to make such an inference conclusive. It is true that wherever amebæ are found in dysenteric stools they go hand in hand with a well-defined pathologic change; it is true that this pathologic change has never been observed in the absence of amebæ. We know, furthermore, that dysenteric symptoms and lesions can be produced in animals by the administration of material in which there are contained amebæ. But this material is not a pure culture; since Kartulis claimed to have produced dysentery in rats with pure cultures of amebæ, nobody has been able to duplicate this experiment. Kruse and Pasquale had bacteria in their cultures, and all of the modern amebologists tell us that it is impossible to cultivate amebæ without the presence of bacteria. The experiments made with the fluid from hepatic abscesses, that are mostly sterile as far as the bacteria are concerned, cannot clinch the evidence either, since they are artificially contaminated with a host of organisms, from a definite knowledge of which we are still far, the intestinal bacterial flora. Attempts to produce lesions in sterile organs by this material have not been made. Above all, however, it is our absolute inadequacy of finding the way in which such protozoic organisms can act on the living tissues of the body. The chemistry of their metabolism is a complete *terra incognita*, in contradistinction to bacteria and several other micro-organisms. We know not even much about the common biologic features of these beings, and, altogether aside from their specification, we do not even know the most essential phases of their development. It is very probable that amebæ are taken in from surface water, but there is not a single absolute proof that they have been found in a suspected water, not even in the assumed form of cysts. Since amebæ have been repeatedly found in normal intestines, we may just as well assume that they are more or less habitues of our intestines and only assert themselves under certain conditions.

By all means, all attempts at classification of the amebæ have been up-to-date unsuccessful. All that we really know is that these amebæ are always present in a certain form of dysentery, and that they always can be found in definite relations to the pathologically changed tissues. But Koch has taught us that this is not sufficient to establish their etiologic quality, just as little as the etiologic cause of variola is established by the continuous presence of degenerated cells and hyaline bodies in the vaccine, that some enthusiastic observers have thought resembled some forms of protozoa. If this careful hesitation, generally observed

by science to-day, in accepting openly the amebic as the etiologic factor of stromic dysentery is highly to be praised, it cannot be denied that on the other side the circumstantial evidence is such as to leave little doubt that finally this disease will be pronounced of amebic origin. Aside from the above observations, especially the pathologic investigations of it have given great strength to this belief, and in this line we are indebted to the classic work of Councilman.

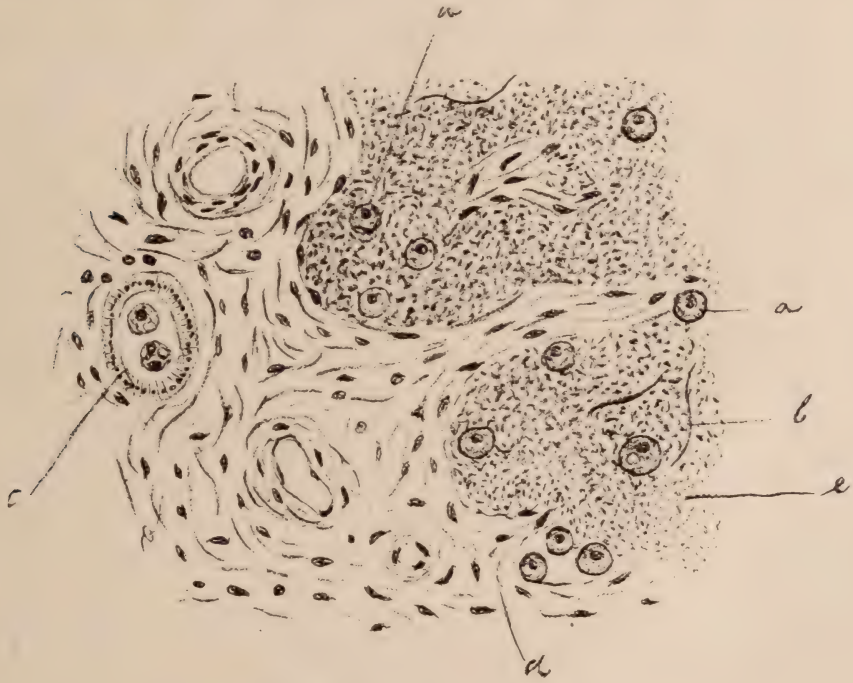
According to the different forms of amebic dysentery (of moderate intensity, gangrenous and chronic), the symptoms vary greatly. In general quite a considerable degree of secondary anemia is produced, and a depression of the metabolism below par. The temperature is usually not above normal, pulse about normal, and respiration not increased. Abdominal pains are very frequent. The stools are usually loose and vary in number, size and quality, are always of alkaline reaction and contain much mucus, together with blood, sometimes pus and large masses of peculiarly swollen epithelial and other cells. In the ulcerative or gangrenous forms, larger and smaller sloughs appear. Amebæ are always found. The urine is mostly normal. The duration of the disease varies between several weeks and years. As complications may be mentioned hepatic abscess, peritonitis, and hemorrhage from the intestine. The prognosis is always grave.

The lesions of the intestines found at autopsy are very characteristic. They are almost always limited to the colon, and only in one case of our series did they extend about six inches above the ileo-cecal valve. The portions involved vary greatly in size and location, sometimes the whole length being affected, while at others only a part showed lesions. It has seemed to me that the rectum and the ascending colon, and next the descending colon, are the most frequent places of ulceration, while the transverse colon was less implicated. Usually, the process stopped short at the ileo-cecal valve.

Macroscopically, the colon appeared in some places much thicker than normal, and when split showed on its mucosal surface a large number of round or irregular nodules, sometimes of considerable size. Everywhere smaller or larger ulcers were seen, the smaller ones, as a rule, running transversely, while the larger were of very irregular outline. The ulcers are covered with a mucous material, and very often with black pigment. Almost always in some ulcers hemorrhagic areas were present. Only in one case macroscopically, some ulcers were found filled with pus. In advanced cases through these changes the normal modeling of the mucosa is altogether obliterated; ulcer adjoins ulcer. The border of the ulcers appeared deeply undermined and their floor is uneven and ragged. The thickness of the bowel-wall under the ulcer varies greatly; in the smaller ulcers it is usually very thin, while in the larger ones it often reaches the thickness of three or four mm. If thus the macroscopical picture is quite well differentiated from other enteric lesions, the microscopic examination reveals a very peculiar process. It would lead here too far to describe the changes in the single formations separately, and I shall instead try to present shortly to you the development of the process.

The mucosa away from the ulcer is little changed, it shows some infiltration and excessive mucous formation by its glandular structures. Some of the latter show often a cystic dilatation, and are filled with mucus, leucocytes and amebæ. It seems to Councilman that these changes are the initial stage of ulcer formation. The submucous tissue is very much swollen and of a gelatinous appearance. Its fibrillar structure is lost. I have never seen ulcers in

the mucosa alone; the smallest I found always involved the submucosa, and this involvement of the submucous tissue is the most characteristic feature of the process. There is a marked proliferation in this tissue with the formation of an enormous number of mast-cells, but all of these cells are widely separated from each other by a homogeneous clear interstitial substance. Amebæ are found in large numbers. Gradually in the center of this submucous focus breaking down begins, leading to obstruction of the vessels and capillaries coming to the muscularis and mucosa, and thus initiating the necrosis of the overlying structures. Very often the necrosis extends only to a small area, and then the ulcers open on the surface with a small, mostly round opening; the submucous necrosis can extend to great distance, so that on cross section we find a large ul-



- a. Amebæ.
- b. Elastic fibres in abscess contents.
- c. Small bronchus with two amebæ.
- d. Proliferated connective tissue.
- e. Contents of abscess.

ceration filled with gelatinous, rarely purulent, material, covered by the muscularis and communicating with the lumen of the bowel by the above described hole. In this way gradually, often very large areas become undermined, and finally sloughing of the roof begins. These are the sloughs voided with the feces. We see, therefore, that the dysenteric process asserts itself first most intensely in the submucous tissue. The finer histologic changes occurring during it are very interesting, but would necessitate too much detail. On successive sections, one can observe that the breaking down of the submucosa is not limited to the ulcer itself, but that channels of necrosis radiate from it in several directions communicating with neighboring ulcers. That the mucosa is not primarily most affected is beautifully shown by its hyperplastic growth, with

which it often outlines the overhanging edges of the ulcers and reflects itself on the lower surface of the undermined area.

While thus the submucous degeneration shapes out the size and form of the ulcer, the process does not stop here. From the floor of the ulcer, the gelatinous change enters the intermuscular layer of connective tissue, reaching there by pushing the muscle fibers of the muscularis wide apart, always closely followed by the amebæ. Especially at this stage the total absence of any inflammatory reaction in the ordinary sense is very remarkable. As soon as the intermuscular tissue is reached, the same proliferation and gelatinous degeneration begins that we have seen in the submucosa, leading here, too, to thrombosis of the vessels and to necrosis of the overlying muscular layer, the sloughs of which are so often found in the feces of this disease. Like in the submucosa, the dysenteric process often spreads extensively in the intermuscular tissue, thus leading to the formation of immense necrotic areas. It is unnecessary to repeat the similar changes that bring about the destruction of the longitudinal muscular fibers, thus involving the serous coat. In some cases the reaction of the serosa is slight, and then we have the fatal perforation. Mostly, however, the serosa responds to the direct attack by a remarkable hyperplasia of its tissue, so that not rarely the floor of the ulcers is formed by very thick masses of newly formed connective tissue. Owing to the often very extensive spreading of the ulceration in the serous coat, large parts of the intestines are changed into thick, leathery masses. Since the formation of these ulcers is confined more or less to the posterior part of the intestine, that means towards its mesenteric attachment, I have seen here in one case the ulceration spread into the mesocolon, which in turn, together with the wall of the colon, had formed a bulky mass of hard, glistening tissue. The follicles of the intestine are always only secondarily involved.

In the one case mentioned above, where part of the small intestine, too, was affected, the process was essentially the same, only that here the open ulcers were very small. Microscopic examination showed that here, too, an enormous undermining had taken place and that therefore these lesions were comparatively recent.

Aside from the very characteristic way of this ulcer formation there are other points that make the whole picture exceedingly singular. This is in the first place the almost entire absence of exudative processes in the ordinary meaning of the word. Of course, secondary infections with bacteria are bound to occur, and then in some cases we see the abscesses filled with pus and the surrounding tissue densely infiltrated. But as a whole, the process is entirely free from exudation, which is especially apparent in the so-called chronic cases. Bacteria naturally abound in the tissues, but they seem to take no part in the process, as we do not see any of the usual reactions occur. Amebæ are abundant everywhere, in the tissue, intestine, lymph vessels, blood vessels and at the margin of the ulcers, although it must be observed that they are not usually observed at the outposts of the process.

The next remarkable point is the peculiar proliferation of the connective tissue, that does not lead to the normal fibrous interstitial substance, but to a homogeneous, clear-looking, gelatinous material; in later stages this becomes edematous, and the cells are imbedded in it as pale, faintly staining structures. In other words, as Councilman has said, the tissues do not react by pus formation, but by proliferation, and it seems that the peculiar influence of the amebæ con-

sists in the reduction of this tissue into a viscid material. Perhaps a ferment action may be assumed here.

The proliferation of the peritoneum, of course, leads to adhesions of the viscera with adjoining organs or between the layers of the intestines themselves. The mesenteric glands were almost always considerably swollen, but showed only the usual hyperplasia.

Liver abscesses as complication occurred in two cases. In both there was an immense abscess near the anterior surface of the right lobe; in one there were found numerous smaller ones, in addition, throughout the whole liver. Always the contents of the abscesses were free from bacteria. The question how these abscesses originate has been much discussed. Councilman was in favor of the peritoneal route on account of the frequent location in the above mentioned position. It seems, however, more probable that the amebæ are carried to the liver by the blood, especially since in sections we so often find the amebæ in the vessels. The lymph-way may be excluded, since in not a single case have amebæ been found in the mesenteric glands.

The abscesses themselves hardly deserve the name of abscesses inasmuch as there is no exudation. Their contents consist of a fluid, granular material with a few disintegrated liver cells and shreds of connective tissue intermixed. Amebæ are present in great numbers, no bacteria. The wall of the abscesses had in our cases no distinct membrane, no zone of infiltration or granulation. From the study of small abscesses which could be viewed in their entirety, it appears that the abscess formation begins in the direct neighborhood of small portal branches around some amebæ lodged in these places in the capillaries. There the liver cells begin to degenerate, their nuclei lose their staining capacity, and the whole cell is changed into granular detritus. Gradually the surrounding liver cells become affected the same way, and the abscess increases in size. Characteristic is here again the behavior of the portal connective tissue, which shows pronounced proliferative multiplication and in the form of irregular, ragged processes protrudes into the necrotic mass. Here, too, the same homogeneous and edematous condition of the intercellular substance is seen, as in the intestine. The wall of the abscesses has always a ragged, irregular appearance, and shreds of the proliferated portal tissue often hang and float in the fluid as long, thin bands.

Besides the abscesses, the liver always showed small necrotic areas (even in those cases where no abscesses were found) that, however, have nothing directly to do with the amebic invasion, and have the same meaning as those well-known foci of necrosis found in other infectious or toxic diseases. They are sharply differentiated from the beginning abscesses by the round-cell infiltration that they always show.

In our cases there did not occur a direct extension of the liver involvement to the lung, which from other reports seems to be a rather frequent occurrence. Only in one case, the lower lobe of the left lung showed lesions, that to my knowledge have not been described before, which are of the utmost interest, since they demonstrate their independent origin and thereby the theory of dissemination of the disease through the circulation. They consisted of a number of small (size of a pea to that of a hazelnut) foci of softening in the lung tissue, about seven in number. On cross section, the larger ones contained a glairy, whitish

red material with shreds of necrotic tissue intermixed. Their wall was covered with a grumous, brownish substance and was irregular in outline and had a ragged surface. The smaller foci appeared on cross section firmer and consisted of blood and mucus. The microscopic examination showed in the first place plenty of amebæ, an intense interstitial thickening of the lung tissue around the foci, but no exudate in the alveoli. Towards the lumen the wall was formed by proliferated tissue with edematous interstitial substance; this tissue protruded into the central necrotic mass in several places as ridges and points. Elastic fibers could be demonstrated in the necrotic substance. Great numbers of streptococci, staphylococci and several forms of bacilli could be stained, but there was no pus and no fibrin. It was impossible to discover any connection or any relation to a bronchus.

Here it is sufficient to state that they exhibit principally the same characteristics as those found in the liver and intestine. They conform with the peculiarities found in hepato-pulmonary abscesses described by Councilman. The changes in other organs observed had only an indirect relation to the dysenteric process and varied much in individual cases. I shall not describe them here.

If we glance then over the picture described, we must admit that it is not only intensely peculiar, but that it is unique. It differs entirely from all of the dysenteric processes or intestinal ulcerations, and its histologic details are met with in no other pathologic process known to us. As I said in the beginning, it does not prove that the amebæ are the etiological agents, but it remains unexplained on any other conceivable basis.

I may add, here, that the lesions of bacillary dysentery have nothing in common with those described. I have studied them in one case that came to autopsy. Their bacillary character is evident and is in accord with our other experiences. In this case the bacillus of Shiga was isolated. I found the same bacillus in another case, one of amebic dysentery, in which it seemed to exist only as an accidental lodger. I conclude this from the following observation: The blood of a patient suffering from bacillary dysentery agglutinated promptly in high dilution the bacillus isolated from the patient's feces. This was not the case with the patient with amebic dysentery, where the specific bacillus and the blood serum did not react. That the latter bacillus was really the bacillus of Shiga was shown by the fact that it was agglutinated by the blood serum of the first patient. It seems, therefore, that in the future the differentiation between amebic and bacillary dysentery will be accomplished early by the agglutination of the bacilli.

THERAPEUTIC VALUE OF WORK IN HYSTERIA AND NEURASTHENIA.*

BY SIDNEY I. SCHWAB, M. D., of St. Louis, Missouri.

In presenting this subject for your consideration, I am conscious that the force of what I have to say will depend more upon the truth and logic involved in the attempt to solve the problem, than upon a brilliant array of therapeutic successes. If there is any scientific worth in an idea or theory, its value is a constant thing and does not depend upon the number of experiments which may be devised for its proof. This is especially so in therapeutic experiments, and

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one success is as strong an evidence of its fundamental value as many, provided always that all conditions are known and all unusual ones taken into account. It is with this belief that I venture to discuss a method of treating a certain limited number of hysterical and neurasthenic individuals, by the application of principles based upon a fundamental necessity of all human beings and of all living things.

This principle is work in its broadest and most general meaning; useful work in its modified sense as a means of therapy. Professor Jacques Loeb, in his work on "The Comparative Physiology of the Brain," in discussing the theory of instincts, touches upon the subject of work in a most suggestive way, and his words might very well form the physiological basis of the application of this method to the class of abnormal individuals we are about to consider. He says: "Human happiness is based upon the possibility of a natural and harmonious satisfaction of the instincts. One of the most important instincts is usually not even recognized as such, namely, the instinct of workmanship. Lawyers, criminologists and physicians frequently imagine that only want makes man work. This is an erroneous view. We are instinctively forced to be active in the same way as ants and bees." A therapeutic method which contains so much physiological truth as this, must in the nature of things be logical and valuable. The work-cure then is merely an effort to apply in a practicable way a physiological law to a pathological condition.

In order to present the subject in as concise a way as possible, within the limits that are naturally imposed, I shall divide this paper into three parts. The first part will have to do with the review of the literature, with especial mention of the work of A. Grohman. The second with the psychological aspect of the question, and the limitations of the method. The third with the relation and discussion of a case of hysteria in which the method was used and where the therapeutic result was most striking.

The specific literature on work as a therapeutic agent is very small. In a careful review of the foreign and English contributions to this subject, I have been able to collect only some dozen or more papers in the last ten years. Even among this limited number, very few articles will be found which treat of the subject in a direct way, or give any but the most general and indefinite data in regard to it. For this reason the works of A. Grohman stand out in sharp contrast to the others, and deserve some comment even in as brief a paper as this. Grohman might well be considered to be the founder of the work-cure (*Beschaeftigungs-Therapie*), and every one who has attempted to use this method seriously must acknowledge his indebtedness to him. A few words in regard to the interesting personality of this man may not be amiss. It will surprise you to learn that Grohman is not a physician but an engineer; and it is a strange commentary on things that from a non-medical brain should have come a method of treating nervous diseases which is so practical that as great an authority as Moebius of Leipzig has called it the best that has ever come to his notice. This man then, according to his own words, was led from his former profession by taste and accident to a new one, the treating of nervously sick people by means of work, and he probably is to-day the one representative of this new specialty. With the aid and encouragement of Forel, Moebius, and others, he established in the neighborhood of Zurich a small institute, which he called a "*Beschaeftigungs Anstalt*" (a work establishment). Here the patients could be

treated by means of work carefully and judiciously selected for them. That Grohman was especially adapted to this sort of activity can be gathered from the words of Moebius in regard to him. He says that he unites in his person a rare combination of unusual qualities, great experience of men and things, rich technical knowledge and thoroughness, calmness and charity, and a healthy knowledge of men, with a fine, one might almost say an instinctive, understanding of pathological natures. So much for the man.

It was no new thing to give to patients shut up in insane asylums work to do. Most institutions the world over have recognized the necessity of affording some means of passing away the time to the people who are its inmates, but to Grohman must be given the credit of applying these same principles to a larger class of nervous patients and psychopaths, to whom work in its broadest sense had been a forbidden thing. In addition to this, Grohman had made it possible to carry out this therapeutic method, to a limited extent, it is true, outside of institutions in private practice. Grohman's chief contribution to the subject in a literary sense are two monographs and several articles. The two monographs were published in 1899; in one he describes his method and its results, with a description of his institution of work, and in the other he formulates a plan for an ideal communal establishment of this kind, where it will be possible for people of moderate means to enjoy its advantages. In a third article the main points from what may be called the psychological side of the question, as well as the method of selection used in determining the kind of work to be chosen, are considered. It might be said with justice that a great inspiration to labors of this kind may be found in a very remarkable, but in this country little known, monograph of Professor Moebius, of Leipzig, entitled "*Ueber die Behandlung von Nervenkranken und die Einrichtung von Nervenheilstaetten*" ("On the Treatment of Nervous Cases and the Erection of Institutions for the Same"). Too much cannot be said in praise of this stirring and suggestive pamphlet, mention of which is always found in papers which treat of the subject under review. The last work deserving of mention is an article by Henri Monnier, entitled "*Ueber die Behandlung von Nervenkranken und Psychopathen durch Nuetzliche Muskel-Beschaeftigung*" ("On the Treatment of Nervous Cases and Psychopaths by Means of Useful Manual Work"). This monograph is based upon observations made in Grohman's institute at the request of Professor Forel, and it gives, from a purely impersonal and objective point of view, the results which were there obtained. Its special value consists in the careful clinical treatment of the subject, which naturally is somewhat missing in the works of Grohman himself. Mention might be made of some of the other papers which have dealt with this subject, but as I have said before, with possibly one exception, they are not of great value.

The chief elements upon which Forel based his claim for the therapeutic value of work are as follows: The work from which this is selected is quoted in Monnier's work, published in 1894. (1) The well-known experience of alienists that work causes a remarkable improvement in cases of insanity, while idleness makes their condition worse. (2) The fact that the majority of nervously-sick people are so as the result, not of peripheral, but of central disturbances in their central nervous system, and that such disturbances are in the main functional in origin. Therefore, a therapy which has any hope of succeeding must

be based upon psychical consideration. (3) A case of hysteria which was absolutely cured by work.

It is necessary to define more closely what is meant by useful work in the sense that it is used in this paper, and to note upon what elements it has to depend for the hope of therapeutic results. By work is not meant the mere using up of muscular energy—as by exercise, gymnastics, physical culture, walking, etc., nor by various useless mechanical forms of employment which are so commonly recommended to nervous invalids, such as household matters, sewing, painting, musical training, etc. The attention and interest of the patient must be aroused, and no work can be useful in this sense until they are. The work must be useful to the patient as well as to others. This happens when some simple, manual, but interesting and varied useful work is devised, which cannot be pursued without a certain amount of mental concentration. In Grohman's institute various sorts of work are in daily use—gardening, carpentering, modeling, decorative art work of various kinds, drawing, etc. The striking thing is that each patient is given only that sort of thing to do which, after a careful study, is thought best suited to his own individuality. In this way the work becomes, in a sense at least, a physiologically applied therapeutic measure. The work itself is not the only factor in the case, but the patient must feel that what he is doing is useful and valuable and holds within itself the capacity of wider development and of general good. It can be seen perhaps from this brief description how many-sided such an activity may become, and how strongly it may direct the neurasthenic or hysterical patient's attention from the analysis of his own personal discomforts. It must be remembered also that in Grohman's institute other factors are at work in addition which cannot be counted upon in the case of a private patient treated at home. I refer especially to the discipline of a communal life, and the influence which a properly conducted company of people exerts upon each individual member. Grohman lays especial emphasis upon this community element of his establishment, and the purely democratic socialistic way in which it is conducted. Among other aids to the work-cure, Grohman mentions total abstinence from alcohol, the repression of various personal weaknesses, regularity and simplicity of living, the out-of-door life, the interest in the development of the theory itself, and many others which may be summed up conveniently under the term "the influence of the communal life."

Monnier's paper is based upon material of thirty-four cases, which include all the varieties of neuroses and psychoses, which may be found in any private institution for the treatment of nervous cases. A large proportion of the cases were hysterical or neurasthenic, in the broader sense of these terms. I can do no more than roughly quote his conclusions:

(1) By means of useful manual work hysteria and neurasthenia, in the narrowest sense of the term, can often be made to completely disappear. In cases of mental enfeeblement, psychopaths, alcoholics, according to the time of their existence and hereditary tendency, the influence of work is often very remarkable. (2) Hypochondriacs and paranoiacs are not especially benefited. (3) An important point in the impulse which this method of treatment gives to the acquirement of some definite work in life, by which the patient afterwards can become self-supporting. Grohman's conclusions in regard to the actual value of this method is based upon one hundred and six patients, and six years' experience.

The average duration of treatment in each case was six months. Among them were a great many failures.

Although the results from the standpoint of the percentage of cures was not especially brilliant, yet the author has felt that the few pronounced successes were strong evidences enough that this form of therapy was in its elements correct. The best results were obtained in cases of neurasthenia and hysterical, and in some beginning acute psychoses. Especially interesting, however, was the account of several cases in which the patients, on account of unsuitable employment, became neurasthenic. By a change of business in life they practically were completely cured. I think I have quoted enough from these papers to show the general idea of the therapy of work and the general result from a clinical standpoint of its use. In some of the other papers the negative view of the subject is taken, and the cases are mentioned in which this method ought not to be used. This point I shall take up later.

A few words in regard to what might be termed the psychology of the work-cure may be of interest, and it may perhaps be possible to see why it is that a neurasthenic or hysterical patient, under favorable circumstances, may cease from being such, under the influence of well-directed employment. The fundamental distinction between people of this kind and others, from the standpoint of character, must, I think, be found in the abnormal exaggeration of the importance of the ego. In other words, there is a pathological state of introspectiveness. I do not mean this in a philosophical sense at all, in the way a psychologist, for example, might be interested in studying his own sensations, but in the importance which an abnormal sensation, painful or otherwise, takes in their whole being. If it is possible to lessen the attention which such a patient pays to his abnormal sensations, they in a measure disappear. In this way we are able temporarily at least, by suggestion, persuasion, or what not, to do away with the symptoms most prominent in the mind of the patient. If it were possible to devise some method by which a patient's attention might constantly, and at the same time unconsciously, be directed into other channels, a great improvement would at once result. Pain exists only by virtue of one's recognition of it; in other words, it is absolutely a mental phenomenon. If it is possible, and it undeniably is, to have the organic basis for pain and still not have pain, how much more possible is it to cause pain to disappear when there is no material cause for its existence? Work of the sort that has been referred to divides a patient's capacity for being aware of his various symptoms, and the more the work in hand takes possession of his attention and his interest, as well as of the more usual sensory mechanism for its recognition, the more the significance of pain as such decreases. Outside of the question of pain and other abnormal sensations which are so frequently found in patients of this sort, there are other abnormal qualities, which are less tangible and less easily described in clinical terms. It is a rather noteworthy fact that, as a rule, an hysterical or a neurasthenic woman is also an unemployed woman or an idle woman. It is also true that quite a percentage of neurasthenic men and hysterical men, while they are employed, are manifestly busy with work that is unsuitable for them. This lack of employment or definite aim in life is much less a matter of choice than a matter of functional incapacity, one might say. I mean by that, that such an individual is physically and mentally perfectly able to lead an active and useful life, but for some reason the impulse to do so is either entirely wanting or is wastefully applied. To such a class of indi-

viduals the prospect even of being able to be of some use to themselves and to others is an alluring one, and this prospect can be made a practical fact by giving to them some work which in its further development may afford to those that need it a means of livelihood and to those who do not a chance of doing something useful and permanent. This appeals to the imagination and to the ideality which so frequently lies at the base of such natures and forms one of the main points to be relied upon for success from the psychological point of view. It is interesting to note how what may be termed the sense of proportion may be developed in cases of this kind. An average hysterical or neurasthenic patient has but a dim idea of the relative importance which her or his abnormal sensations bear to the rest of the world. The most important thing not only in such a person's consciousness, but in that of others is the perception and analysis of his own physical and mental condition. The effect of work in the first instance is to create a new standard, the units of measurements of which involve a new element. It may be so stated: The individual, his symptoms, and the work in hand; with the development of the latter, the importance of the two former decline and the interesting condition results which was described to me by one of my patients. The symptoms she complained of still remained, but their importance and the amount of attention that could be devoted to them steadily decreased. In other words, this state of mind is an approach to the condition where the non-existence of such symptoms can be effected; for, as I have said before, symptoms that are due to a purely functional cause, exist only by virtue of their conscious recognition. Such very briefly are some of the psychological aspects of the question. By considering these, which seem to me the most important, and others as well, the effect of work upon the mental condition of hysterical and neurasthenic patients can be noted.

Before going to the specific case which is meant to illustrate some of the foregoing facts, it might be well to state briefly the class of cases in which the therapy of work might have an application, and the class of cases in which it is directly contraindicated. The negative side of this question has been very well treated in Erlenmyer's article on "The Importance of Work in the Treatment of Nervous Cases in Institutions," published in the *Berl. Klin. Woch.*, February 11, 1901. The work-cure is contraindicated in (1) cases where fatigue and exhaustion are prominent symptoms; (2) states of excitement; (3) cases where psychopathic symptoms, such as melancholia, anxiousness, are prominent; (4) where the patient has always worked and can work, and in spite of this, the nervous symptoms exist; (5) cerebral or spinal diseases.

From the positive side it might be said that the work-cure can be tried with the hope of success in that class of neurasthenic and hysterical subjects where there exists an average amount of potential physical vigor, where there is no organic nervous or other disease, and where, above all, there is found the requisite amount of intelligence and mental training to enable them to appreciate and understand the purpose and the meaning of the efforts made to hold them. In the class of patients which this paper aims to touch upon, that is neurasthenics and hysterics, it will be found that among them there is, quite a large proportion that come well within these conditions. In my own experience I have found very few who might not have been treated in the manner which has been indicated if the patient's circumstances and the patience of the physician had been used to their utmost. Frequently I must confess that the effort has not

been made for the lack of a certain amount of therapeutic courage and of the lack of technical knowledge which is at all times so essential. The last part of this paper will deal with a brief account of a case of pronounced hysteria in a young woman, where the work-cure has resulted in the marked improvement of the patient and in perhaps her final cure—that is if we can ever say that hysteria is really and permanently cured. The history of the case will be of necessity very brief, because from the clinical standpoint it offers little of interest. A young woman, about thirty years of age, neurotic, of good education, with specially good training in piano-playing. The importance of this last will appear when the question of the selection of the kind of work is under consideration. The patient has always been of a nervous temperament, much given to introspection. Some ten years before, owing to various family troubles, the patient had to face the necessity of earning her own living. The worry incident upon this caused the first outbreak of hysterical symptoms, which afterwards became so prominent and constant. At this time they took the form of general weakness, with periodically occurring attacks of paralysis, generally limited to the right side, paresthesias, headaches, and ocular disturbances. During the years that elapsed from this time until the patient came under my observation, almost every commonly known hysterical symptom was experienced by her, and during this time also almost every method of treating them was used. Rest cures, European travel, electricity, diet, drugs, suggestion, were all tried. Attempts at employment had been made, but they were as a rule unwisely selected; these were piano-teaching, kindergarten, and gardening, etc. The patient had gained in weight very considerable during these years and was the picture of physical health. About a year and a half ago she came to me and presented, at that time, the following group of symptoms: insomnia of the most pronounced form, intense nervousness and irritability, muscular weakness, so pronounced that a walk of one block left her completely exhausted, headache, nausea, occipital paresthesia, right-sided hemianesthesia, and an asthenopia so marked that the use of her eyes longer than one-half hour a day was impossible. There was a great deal of vertigo. The mental state was even more marked. She was very emotional, crying very readily, was depressed, talked of suicide, and saw no hope for herself in the future. It is useless to go into the case more in detail; such a group of symptoms is too well known to need further description. All of these symptoms were present in the face of an absolutely negative physical examination, with the exception of some slight uterine displacement, which in the opinion of the gynecologist who had treated her was of little significance. I think you will agree that the prospect of any therapeutic success in this case seemed dubious; but the intelligence of the patient, together with her normal physical condition, seemed to form an ideal case for the work therapy. Some two weeks were spent in talking with her of the ideas lying at the basis of the method to be pursued. Gohman's work and whatever other literature on the subject could be found was carefully gone over, and then came the selection of the work to be pursued. In the first place the work had to be manual; in the second, it had to be useful; and after that, interesting, attractive, and capable of giving to her a future means of livelihood. Any of you who might be impelled to settle a question of this sort will be amazed at the poverty of selection which is open to a young woman. Of previous training or experience in manual work there was none, but there was to be expected from her previous musical train-

ing a certain amount of manual dexterity. This was the only positive factor which was present. A certain artistic decorative taste might be assumed, together with an absolute lack of mechanical skill. After much thought, it was decided to attempt book-binding. This seemed to fill all the requirements, and at the same time to afford the chance of a future livelihood. Book-binding is mostly manual and requires the closest attention and the greatest care in the matter of detail. In addition, it is distinctly a fine art and is capable of the widest development along the lines which have previously been alluded to. The patient was put to work to learn the trade in the shop of a skillful binder. Two weeks of work was the limit at first placed upon her. From the very beginning a most marked improvement was to be noted, especially in the mental state. The asthenopia disappeared, but the pains remained pretty constant. At the end of six months the patient removed to another city to be under one of the masters of her craft. There she is working from six to eight hours each day and has become so interested in her craft that she has taken no vacation since she began. In point of character and temperament the change has been striking, and although some of the symptoms still remain to bother her, they occupy but a small place in her life. Her work has steadily improved in merit, and there is little doubt that in a year or more this previously hysterical invalid will be able to set up her own shop and lead an active and useful life. It should be mentioned that in all this time there was no medicine given at all. I mention this one case because it stands out as a partial success against the dark background of partial failures in a half dozen other cases in which I have attempted to use the method of Grohman. The failures in the others I attribute solely to my own faulty technic and to my lack of knowledge both in the selection of the work to be pursued and in the manner of introducing the patient to it. I am aware that this one case makes but a feeble argument in support of the work therapy, but its value, I am sure, will be apparent in spite of its loneliness. In conclusion I will quote from Grohman again. At the conclusion of one of his articles he says: "All in all, I believe that the work therapy for nervous people is a test of great patience and endurance on the part of the physician. Whoever feels that he has the necessary patience and interest will be able to help many people."

BIBLIOGRAPHY.

- Comparative Physiology of the Brain, p. 197. Jacques Loeb.
 Erfahrungen in der Beschaeftigung von Nervenkranken. A. Grohman. Psychiatrische Wochenschrift, June 3, 1900.
 Versammlung Deutscher Naturforscher und Aerzte, Abteilung fuer Neurologie und Psychiatrie. Reported Neurologisches Centralblatt, 1900, p. 920 (Discussion of Erlenmeyer's paper).
 Ueber Arbeitskuren fuer Nervenkranken. Eulenburg. Die Therapie der Gegenwart. January, 1899.
 Ueber die Behandlung von Nervenkranken und die Errichtung von Nervenheilstaten. P.J. Moebius. Berlin, 1896. S. Karger.
 Entwurf zu einer Genossenschaftlichen Musteranstalt fuer Unterbringung und Beschaeftigung von Nervenkranken. A. Grohman. Stuttgart, 1899.
 Technisches und Psychologisches in der Beschaeftigung von Nervenkranken. A. Grohman, Stuttgart, 1899.
 Ueber die Bedeutung der Arbeit bei der Behandlung der Nervenkranken in Nervenheilstaetten. A. Erlenmeyer. Berliner Klin. Wochenschrift, February 2, 1901.
 Zur Indication der Beschaeftigungstherapie bei functionellen Nervenkranken. Wiener Klin., Rundschau, 1900. Heft 2 u. 3 (Ref. Neurologisches Centralblatt, p. 872, 1900)
 Ueber die Behandlung von Nervenkrankheiten und Psychopathen durch nuetzliche Muskelbeschaeftigung. Zeitschrift fuer Hypnotismus, 1898, No. 3.

CLINICAL REPORTS.

REPORT OF A CASE OF NECROSIS OF THE FRONTAL AND CONTIGUOUS BONES.*

BY LOUIS RASSIEUR, M. D., of St. Louis.

ASSISTANT SUPERINTENDENT ST. LOUIS CITY HOSPITAL.

The patient, Mr. W., has been in this institution at various times during the last fifteen years. When he presented himself the last time he gave the following history: His age is fifty-two years. His occupation is that of a shoemaker. He was never married. His habits have always been very good. He



FIG. 1.



FIG. 2.

never used tobacco or alcoholic liquors to excess. He was sexually moderate but not always careful.

His family history is as follows: His father died when patient was still very young, and patient does not know the cause of death. His mother died of senility. He had no brothers and no sisters.

The patient's early life was free from the diseases of childhood. He enjoyed good health up to his fifteenth year, when his left knee presented all the symptoms of tubercular arthritis. He did not have his knee treated surgically, but allowed the process to run its course. The arthritis resulted in an ankylosis of left knee and contractures, necessitating the use of a crutch. He had gonorrhea

* From the service of H. L. Nietert, M. D., superintendent and surgeon St. Louis City Hospital.

at the age of twenty for the first time, and a second time at a later period. He never had chancreoids.

His present trouble is as follows: When patient was twenty-six years old he noticed a pimple on his foreskin. He promptly cauterized with pure carbolic acid. The cure was seemingly so rapid and complete that he did not think it necessary to consult a physician. About six months later patient became sick and presented a mild macular eruption. He consulted a physician. The eruption disappeared soon after the treatment was begun. The physician at the time informed him that he had lues and treated him until all external appearances of the disease and all subjective symptoms had ceased. Patient now felt well and worked very steadily at his trade. About eighteen years ago he noticed a swelling forming at site of left frontal eminence. This swelling was attended by



FIG. 3.

few subjective symptoms and had a doughy consistency. He again consulted a physician. The mass was opened and pus came from it. The sore did not heal but continued to discharge and spread up to about three years ago. In 1899 the process began to subside under the influence of potassium iodide and hydrarg. bichlor. One abscess would form after another, open and discharge. The bone was necrotic, portions at times falling away—and some were also removed by the various physicians who attended him. The resulting cicatrices led to great contractures.

The process is mainly confined to the front of the head. His occipital region is not very prominent. The vertical portion of the frontal bone—the contiguous portions of the greater wings of the sphenoid—and the contiguous portions of the parietal bones have been replaced by a cicatrix. Above and be-

hind the left parietal eminence are seen three necrotic spots, each the size of a circle 1 cm. in diameter. Above and behind the left ear is a slender necrotic spot 2 cm. long and $\frac{1}{2}$ cm. wide. The remainder of the scalp is covered with hair thinned by seborrheic eczema. The cicatrix is very dense and firm. The pulsation is faintly but distinctly transmitted from the brain.

The center of the scar shows a superficial ulcer, circular and about two centimeters in diameter. Blood-vessels have developed and are plainly visible in the cicatrix. This immense cicatrization caused a drawing up of both eyebrows, eversion of the right upper eyelid, and nodular gatherings of the scalp above. Beneath the cicatrix, just above the nose, is felt a bony growth the size of a hazelnut. The cicatrix is a little less sensitive than the surrounding tissues. The patient has no subjective symptoms, and no focal symptoms have to the present time been manifest.

The ectropion of the right eye has existed for the past five or six years. Since that time patient has had a severe trachoma and an extensive pannus. Thus the vision of the right eye is obscured. The vision of the left eye is unimpaired. The septum of the nose is perforated. The sense of smell is good. The oral cavity presents a perforation of the hard palate just to the left of the mesal line. He has no teeth, and the alveolar processes are almost entirely absorbed. The sense of taste is unimpaired.

Digestive System.—Appetite is good. Bowels are regular. Assimilation is fair.

Respiratory System.—He has no cough and no expectoration. Tactile fremitus is not increased. Percussion note is normal. Respiratory murmur is good.

Circulatory System.—Area of cardiac dullness is normal. No murmurs are audible. Slight hardening of the arteries is present.

Genital Apparatus.—Patient has at present a phimosis. Genital organs are otherwise normal.

Urinalysis.—Single specimen, c.c. 180; specific gravity, 1.025; translucency, clear yellow color; odor, normal. Reaction to litmus is acid. Albumins are not present by Heller's test (nitric acid test). Sugar is not present (by Fehling's copper test). Microscopical: a few epithelial cells and oxalate crystals were seen; no casts were noticed.

Similar cases have been reported by Broca, Memel, Kuester, Bruns and Fraenkel. More recently W. N. Cole, of Columbus, Ohio, reported a similar case (*The Journal of A. M. A.*, January 25, 1902).

The interesting features of this case are:

- (1) The extreme necrosis.
- (2) Absence of focal and subjective symptoms.
- (3) Subsidence of process when so far advanced.

A CASE OF ACUTE ARTICULAR RHEUMATISM OF THE CRICO-ARYTENOID JOINTS.

BY WILLIAM E. SAUER, M. D., of St. Louis.

Mrs. K., aged forty; is a very fleshy woman, weighing about two hundred pounds. Her parents died of old age. Has one sister, who is enjoying good health. The patient had measles and whooping-cough when a child. When twelve years old she had an attack of acute articular rheumatism involving nearly all the large joints. She was confined to her bed for more than a month. Since that time she has had two similar attacks, but they were not so severe. Otherwise she has always enjoyed good health. Has never had any throat trouble, nor could any venereal history be obtained. For two months previous to February 28th she had pain in and some swelling of the ankle joints, which did not confine her to her bed, but she was unable to leave her room until the above date, when she went out for a walk, and the following day went down town. The next morning she awoke with a sharp pain in her throat, was very hoarse, and when attempting to swallow or speak the pain was quite severe. Thinking that it was only a cold, nothing was done until several days later, when she noticed that the pain was getting worse, and that she could not speak above a whisper. Dr. A. V. L. Brokaw was called in, and, at her own request, she was sent to St. Luke's Hospital, on the morning of March the 8th, when Dr. Brokaw asked me to see the patient. I saw her that afternoon. Her temperature at 9 A. M. had been 101° F.; pulse, 108; respiration, 24. At 3 P. M. it was 100.2° F.; pulse, 100; respiration, 24. She was sitting up in bed the breathing was very stentorian in character. She could not speak above a whisper and complained of pain in her throat, especially on swallowing. I then made a laryngoscopic examination and found the rima glottidis very narrow, the vocal cords and arytenoid cartilages immovable, but no evidence of any inflammation of the cords themselves. There was, however, some slight swelling and redness of the mucous membrane covering the arytenoid joints. External palpation of the larynx elicited sharp pains when pressure was made in the region of the crico-arytenoid joints. Having obtained a history of rheumatism, I ordered her to be given ten grains of the salicylate of soda every two hours, and a Priesnitz compress applied to the neck. When I saw her twenty-four hours later she was breathing somewhat easier and the pain was less, but she had spent a very uncomfortable night, not being able to breathe while lying down; had to sit up all night. Examination of the larynx did not reveal any appreciable changes. Her temperature at 9 A. M. had been 101°; pulse, 102; respiration, 24. At 3 P. M. it was 99.4°; pulse, 88; respiration, 24. The salicylate of soda was ordered continued as before, but after the tenth dose had been given it was ordered to be given only every four hours. Ten grains of trional were ordered in case she did not sleep, to be repeated in two hours if necessary.

On March 10th I saw her again, in the afternoon; she was complaining of headache and ringing noises in her ears; the pain in her throat was very much better, and she could breathe easier. Examination of larynx revealed some slight movement of the cords, and the space between the cords was some larger. Her temperature at 9 A. M. was 100.4°; respiration, 22; pulse, 92. At 3 P. M. it was

99.2°; pulse, 80; respiration, 22. I ordered the salicylate of soda discontinued and fifteen grains of aspirin to be given every four hours instead, on account of the tinnitus which the salicylate had produced.

On March 11th she was feeling so much better that she was up and about; had very little pain in her throat. Her voice was returning again and she could swallow without much pain, but she was troubled with a slight cough. The aspirin was continued as before. Her temperature was 100.2° at 9 A. M.; and at 3 P. M. 99.2° F.; pulse, 92; respiration, 18.

March 12th the nurse reported that the patient had had a very troublesome cough during the night, and was able to sleep but little, and her headache still troubled her somewhat. Since morning she had been coughing up quite a great deal of mucus, but her headache was some better. Her temperature at 9 A. M. was 99.6°; pulse, 88; respiration, 18. At 5 P. M. the temperature was 99.6°; pulse, 88; respiration, 26. A superficial examination of the chest revealed large moist rales over both lungs. A mixture of the infus. of ipecac and ammonium chloride was ordered, and the aspirin continued as before. Her voice was still somewhat rough, but had no pain, and could swallow without any difficulty. She left the hospital the following morning (March 13th). Her temperature that morning was 98.6°; pulse, 88; respiration, 20. Aside from the cough she was feeling very well. Her voice was about normal and she was entirely free from any pain. On examining the larynx, found that the movements of the cords were not as free as they normally are, but otherwise could not detect anything abnormal.

On March 19th I saw her again. She informed me that she had not been taking any medicine for several days, and that since March 18th she had been having some pain in the left shoulder joint, but not severe. I again examined the larynx, but could detect nothing abnormal. Since then I have not seen the patient, but Dr. Brokaw informed me that she had had pain in the joints of the lower extremities, and had gone to Okawville, Illinois, to take the baths at that place.

The case here reported is of interest in that it presents a rare manifestation of a very common affection. The literature on acute articular rheumatism of the laryngeal joints is not extensive. The possibility of such an occurrence is mentioned in most of the larger text-books on laryngology, but the actual number of cases reported is small. Desbrousses, in 1861, was the first to admit the possibility of such a condition being due to rheumatism. He reports the case of a woman twenty-seven years of age with rheumatism and pericarditis, and on the 4th day the larynx became involved. Death occurred in twenty days, from gradual asphyxia. Autopsy showed the affected joint to be filled with a reddish colored fluid. Since that time cases have been reported by Windelschmidt, Siamonoski, Compaired, Meyer, Sendziak, Baurowicz, Freudenthal, and others.

CASE OF COLLATERAL CIRCULATION AFTER TEARING OF BOTH RADIAL AND ULNAR ARTERIES.

BY WILLIAM J. KRESS, M. D., of St. Louis.

L. B., male, aged forty years; injured August 31, 1900, while operating a leather stamping machine. His left forearm was badly crushed, completely lacerating all the flexor muscles and tearing out their bellies, severing all tendons as well as both the radial and ulnar arteries. The entire lower third of the radius was crushed into several small pieces which it was necessary to remove. The radius was also fractured at the junction of the upper and middle thirds.

After consultation with Dr Bernard S. Simpson, who was called to assist me, it was decided to wait for gangrene and its line of demarcation to point out the extent of tissue to be removed. The radial and ulnar arteries were ligated, and all tendons taken up and sewed into their anatomical relations. A bichloride pack, 1 to 2000 and splints were applied. The patient's temperature on the following day was 99 1-5, gradually rising each day until it reached 101°, which point it never exceeded. The patient's general condition remained good; he was cheerful and suffered very little except when the dressings were changed each morning. Fourteen days after the injury, a well-defined line of demarcation became apparent at the index, middle and ring fingers close to the metacarpophalangeal articulations, and the line also showed on the little finger at the last phalanx.

All fingers were amputated in healthy tissue just above the line of demarcation. The parts healed slowly by granulation and there was very little sloughing, leaving the hand healthy as well as the thumb and little finger. The blood supply to the little finger, thumb and the rest of the metacarpus must have been supplied through the interosseous arteries, because the main trunks were both cut.

The patient has regained motion in the thumb and little finger and in the wrist. I had been advised by several prominent physicians to amputate well up on the forearm on the day of the injury, but declined to do so. The collateral circulation was completely established and a useful hand remains. This case again illustrates in a striking manner that early amputation on the hand and forearm is a practice to be avoided. I believe we cannot be too conservative in the practice of surgery when the hand or fingers are involved. The danger of septic absorption is reduced to a minimum by the moist antiseptic dressing.

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Professor; Director of the Evangelical Hospital, Warsaw, Russia.

JULIUS SCHNITZLER, M. D.,

Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,

Berlin, Germany.

Address all communications to the INTERSTATE MEDICAL JOURNAL, LINMAR BLDG., ST. LOUIS, MO.

EDITORIAL COMMENT.

THE MISSOURI LAW FOR THE PREVENTION OF BLINDNESS IN INFANTS.

Legislation looking to the prevention of blindness consecutive to ophthalmia neonatorum was initiated in the United States in 1890 by the passage of "An Act for the Prevention of Blindness" by the legislature of the State of New York. This law, which has served as a model for similar laws subsequently enacted by the States of Maine, Rhode Island, Ohio, Maryland and Minnesota, provided that "Should any midwife or nurse notice that one or both eyes of an infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of such midwife or nurse to report the fact in writing, within six hours, to the health officer or some legally qualified practitioner of medicine." In 1895 the following bill was passed by the Missouri State legislature and signed by Governor Stone:

"Be it Enacted by the General Assembly of the State of Missouri, as follows:

"SECTION 1. Should one or both lids of either eye or of both eyes of an infant become red or swollen, or should there be any discharge from either eye or from both eyes, at any time within three weeks after its birth, it shall be the duty of the midwife, nurse, or other person having charge of said infant, at once, unless for good cause shown, to report the condition of said eyes to a legally qualified practitioner of medicine.

"SEC. 2. Every health officer shall furnish a copy of this act to each and every one who is known to him to act as midwife or nurse, in the city or town

for which such health officer is appointed, and the secretary of state shall cause a sufficient number of copies of this act to be printed, and shall supply the same to such health officers on application.

"SEC. 3. Any failure to comply with the provisions of this act shall be a misdemeanor, and shall be punishable by a fine of not less than ten and not more than one hundred dollars, or by imprisonment not to exceed six months, or by both such fine and imprisonment.

"SEC. 4. All acts and parts of acts inconsistent with this act are hereby repealed."

This law conforms in general to the laws enacted in other States. It is, however, superior to any of its predecessors in that it distinctly provides that each midwife and nurse shall be furnished with a copy of the act, thereby rendering invalid a fictitious plea of ignorance of the law.

In the seven years during which the law has been on the statute books there have occurred no convictions, and, as far as the writer has been able to ascertain, no prosecutions. Does this mean that the race of midwives and nurses in the State of Missouri are any less careless and ignorant than their sisters in other States? Assuredly not. It simply indicates that when cases of gross neglect resulting perhaps in the loss of one or both eyes have been brought to the notice of the medical practitioner, he has not lived up to the courage of his convictions, and by failing to prosecute, has distinctly connived at the violation of the law. It is assuredly not an agreeable task for a practitioner to appear as a prosecutor against a midwife, especially as his motives will inevitably be misunderstood by a large number of the laity. But this consideration should weigh not a hair in the balance when the securing of a single conviction would bring about healthy respect for the law in the minds of these ignorant women and thus be the direct means of saving infants yet unborn from the misery of irremediable blindness.

COMPLICATIONS OF CHICKEN-POX.

In the great majority of cases varicella is such a mild infection that, except from the standpoint of diagnosis, practitioners do not give it a great deal of attention. That it is, however, not always an absolutely benign affection has been demonstrated repeatedly. Semtschenko has reported eight hundred and seventy-two cases of varicella, seventeen of which had a complicating otitis media and thirty-four an osteitis. Rille has reported several cases of suppurative arthritis. Of late, however, especial attention has been paid to the condition of the kidneys in varicella. According to Rille, albuminuria has been found in at least twenty per cent. of all his cases, while the efflorescence was at its height.

It would appear, however, that in the majority of these cases, the albuminuria amounted merely to a febrile manifestation. True nephritis occurs in a very much smaller proportion of the cases. Semtschenko found albumin in only 10.5 per cent. of his cases.

It is noteworthy that the severity of the eruption does not stand in any causal relation to the albuminuria, because in cases collected by several French observers, some of the severest cases showed normal urine, while albumin was often found in the very mildest.

It is also to be noted that the nephritis, when it does occur, does not supervene until the second week from the beginning of the attack.

Obviously, therefore, it would be the part of wisdom to examine the urine in varicella as a matter of routine, and to continue the examinations, where albumin is found, for some time after all acute symptoms have subsided.

THE ORIGIN OF SOME MODERN METHODS OF MEDICAL TREATMENT.

We are too prone, all of us, in this day of restless activity, to cheat the past of her dues; in other words, to give little or no thought to the origin and originator of this or that method which has become an every-day usage with us. Who but a lecturer on the practice of surgery knows or even cares when the first artery forceps was invented, or by whom the first ligature applied!

Some of the chemicals have, as is commonly known, been used for a long time in the effort to produce hemostasis; but one of them has come into decided prominence of late, and in its free use many of us doubtless pride ourselves that we are just a step in advance of the most of our brethren. Reference is made to gelatine, which the French physiologist Dastre showed to possess the property of making a dog's blood coagulate when injected into a vein.

It was not much later that a surgeon of the nationality just referred to, Lancereaux by name, applied this idea to the treatment of aortic aneurism, hoping by the introduction of gelatine under the skin to bring about clotting of the blood in what may be termed the area of least resistance, viz., the aneurismal sack. Then the world took up the fad, and for a time there was as much written about aneurisms as is done on the subject of prostatic hypertrophy at present, or was on that of the Gasserian ganglion some two years ago.

It will doubtless be a matter of surprise to many of the friends of gelatine to know that it has been used almost two thousand years in checking hemorrhage. Dr. Y. Miwa, of Chiba, Japan (whose article is abstracted in the surgical department of this number), is authority for the statement that the ancient Chinese and Japanese used this product extensively for the purpose now under discussion. As early as 204 B. C., the practice was described by the former, and the literature of the two countries for the years succeeding that time was full of mention of the subject. The custom was to prepare gelatine from the hides of cattle, then it was blown into the cavity from which the blood came, being employed thus, both in the form of a solution and of a powder. It was considered useful in hemorrhages from the nose, mouth, rectum, uterus and urethra.

Thus it is that a substance which we have prided ourselves in terming one of the more modern therapeutic agents, is in reality about as old as the Christian era itself. Possible research might show that many other means and methods now regarded decidedly new, gain this distinction only because they are so old as to have been completely forgotten and lost sight of for a few centuries.

THE ST. LOUIS MEDICAL LIBRARY—A FACTOR IN THE DAILY LIFE OF THE ST. LOUIS MEDICAL PROFESSION.

Many attempts have been made during the existence of St. Louis to found a medical library. Unfortunately one and all have met with failure. The apparent hopelessness of the task has doubtless deterred many earnest workers from venturing in this field of activity. It has remained for the St. Louis Medical Library Association to achieve what has hitherto proved impossible.

The St. Louis Medical Library Association has completed its third year of existence. It can point with justifiable pride to its tangible assets. Beginning with nothing, it has created a modest but efficient reference library. Two rooms in the Y. M. C. A. building are filled (in reality overfilled) with the conventional equipment of a library in active operation. These rooms are open for use during the afternoon and evening of each day save Sundays and legal holidays. The assistant librarian is in attendance, and to her cordial co-operation and proven efficiency much of the success of the daily reference service is due.

It has been the policy of the association to expend its limited income in the acquisition of standard current literature rather than text-books. Reflection upon the rapid passing of the accepted knowledge of to-day into the limbo of yesterday will furnish indorsement of such a policy during the earlier years of the library's growth. More than perfunctory commendation is justly due the adopted system of indexing original articles that appear in the current literature. Only those who search for data, whether for personal acquisition or in the formation of a "reference list," can appreciate the full value of such an efficient aid as a time-economizing agent. Access to such an index is to a worker ample compensation for the modest outlay required for membership.

There are now on the shelves 3482 volumes. One hundred and eighty-eight journals are received, of which two-thirds are American and one-third foreign. Of these, sixty-one have been selected as suitable material for indexing. The following statistics show at a glance the scope of this system and exhibit such articles as have been indexed up to date:

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A total of 20,785.

It cannot be successfully controverted that the St. Louis Medical Library Association has done its duty well. This fact is the more strongly emphasized when consideration is given to the limited income from which such a valuable scientific nucleus has been created. Membership is divided into three classes—Life, Active and Associate; the monetary consideration being, respectively, one hundred dollars; twenty-five dollars the first year, and five dollars annually thereafter; and five dollars annually. Life and active members participate in the government and policy of the association; associates secure the advantages of the library, but are debarred from the franchise. The total membership is one hundred and forty-eight, of which eighty-two are active and sixty-six associate. Contributions from extraneous sources during three years have amounted to a trifle over one thousand dollars.

Thoughtful consideration of this brief array of facts leads to certain interesting conclusions.

First.—The Library Association has consistently and faithfully developed plans by means of which a medical library is now in active operation in St. Louis.

Second.—The medical library has been created, and is to-day still laboring, under heavy disadvantages.

Third.—The disadvantages are: lack of moral support and lack of financial support on the part of the profession; lack of an adequate endowment.

Fourth.—The medical profession of St. Louis and its environs stand guilty of non-appreciation of one of the most valuable aids in developing medical knowledge, in eradicating error, and in furnishing not only corner-stone material, but the scientific grace and culture of the accomplished physician.

It is of vital interest for the medical profession of St. Louis that it should realize the true etiology of this scientific lethargy.

Is but eight per cent. of the medical profession of St. Louis in need of consulting the scientific literature of the world? Are 1700 St. Louis physicians so versed in medical literature that they can justify themselves in ignoring the facilities afforded by the medical library? Are there 1700 private medical libraries in St. Louis better equipped than the St. Louis Medical Library? Are there 1700 St. Louis physicians too poor to invest the modest sum that is requisite to secure membership in the Library Association? Is it a fact that 1700 St. Louis physicians are "too busy" to utilize a medical library? Are there but 148 St. Louis physicians who are willing to do their individual share towards supporting a medical library in order that the local medical profession (in addition to themselves) may be kept in touch with affairs medical beyond the State boundary lines of Missouri?

If such be the case the time has arrived for the medical library to discontinue its superfluous existence; for the officers of the Library Association to cease from their unappreciated labor; and for the medical profession of St. Louis self-pillared upon a crass provincialism, to content itself (apres St. Simon Stylitis) with a serenely complacent and uninterrupted contemplation of its own umbilicus.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

Hemoglobinuria.—STEMPEL, Breslau (*Centralblatt fuer die Grenzgebiete der Medizin und Chirurgie*, March 10 and April 3, 1902), presents a most complete review of the literature on hemoglobinuria, with some two hundred literature references. The manner in which the hemoglobin leaves the cells and ultimately gains entrance into the urine was carefully described by Ponfick and Litten. Forsbach demonstrated that the hemoglobin is excreted by the glomeruli, and his views were corroborated by the experiments of Ribbert. Silberman and Christomanos hold the opposite view, maintaining that the tubules are concerned in this process.

There are three forms of hemoglobinuria, depending upon the causative factors, viz.: paroxysmal, infectious, and toxic. Paroxysmal hemoglobinuria was first observed by Charles Stuart in 1794. Following this the English had many opportunities to observe the affection. Dickinson considered it renal in origin. Hassal called it winter hemoglobinuria, because he observed it in cold weather only. Fleischer found that unusual physical exertion could bring about hemoglobinuria. The theory of infectious origin found early support, and it was often observed in syphilis and malaria. Boas thinks that the infection produces a marked alteration of the blood in which the hemoglobin is held in loose combination, while the exposure to cold, exertion, etc., results in the dissolution and excretion of the hemoglobin. The French have been the chief adherents to the theory of renal origin. Popper attributes the phenomenon to a vasomotor neurosis. Leube and other German authorities think it due to a lowered resistance of the red blood corpuscles, in which the hemoglobin is held in very loose combination. Legg found this affection most often between the ages of twenty and forty; never under two years of age and never over forty. Anemic, poorly nourished individuals are especially predisposed to the affection. He usually experiences certain prodromal symptoms, which enables him to predict the attack. A variety of symptoms have been described by different writers. Experimental and blood examinations have been made in paroxysmal hemoglobinuria by Ponfick, Ehrlich, Du Cazal, Goebler, Hayem, Chvostek and others, and have led to a fair knowledge of the pathology of the blood in these cases. The diagnosis is not a difficult matter, especially when the patient is seen during an attack and the urine is examined microscopically and chemically. It must be differentiated from hematuria through a microscopical examination. The prognosis in the paroxysmal type is, *quoad vitam*, not bad. This does not hold good, however, in the toxic and infectious types. It frequently holds on for a number of years, disappearing in the summer time and reappearing in the winter. Various forms of treatment have been recommended: quinine in cases due to malaria, anti-luetic treatment in those due to syphilis, etc. The paroxysmal type has presented greater difficulties in treatment, since it is due to a predisposition. The patient should be kept very warm. Leyden and Klemperer have recommended the hardening process, gradually rendering the patient more tolerant to cold. Hemoglobinuria in which infection has played the chief role have at various times been observed in syphilis, malaria, pneumonia, measles, scarlet fever, typhoid fever, tetanus, erysipelas, etc.

Among those substances which often produce a dissolution of the red blood corpuscles in the body are a number of drugs which are almost indispensable. These cases are more apt to result seriously than those of the paroxysmal type. This is due to the obstruction of the uriniferous tubules in these cases and the resulting uremia. The substances, which under certain circumstances are cythemolytic, may be secretions or constituents of the body itself or substances from the vegetable and mineral kingdoms. Hemoglobin itself, the blood of other animals, distilled water, etc., have all been known to produce hemaglobinuria when injected into the blood. Among chemical substances which have been known to produce the same may be mentioned sulphuric acid, hydrochloric acid, toluylendiamin, aniline oil, oxalic acid, pyrogallie acid, potassium chlorate, sulfonal, quinine, carbolic acid, glycerine and certain gases.

The author concludes from his study of the literature that every individual is susceptible to the toxic and infectious forms of hemoglobinuria, but that the paroxysmal form is experienced only by those who have the predisposition, be it acquired or congenital, viz., a pathological condition of the red blood corpuscles. Cold, exertion, etc., are but the exciting causes.

The Blood in Measles and Scarlet Fever of Childhood.—RECKZEH, Berlin (*Zeitschrift fuer Klinische Medizin*, Parts 1 and 2, 1902), presents, together with the report of the results of his observations on the blood in measles and scarlet fever, a complete review of the literature on the subject. The detailed examination of the blood in ten cases of measles gave the following results: The number of red blood corpuscles varied from 3.9 to 7.3 million to the cubic millimeter. The highest count was found in a six-year-old boy. In nine of the cases there was an increase in the number of red blood corpuscles during convalescence. Whether this was due to a return to the normal after the fever, or whether it was due to the improvement of the surroundings of the children, it is difficult to say. The complications brought about by a high fever did not influence the number of leucocytes. In six cases there were isolated macrocytes, in one microcytes, in two normoblasts, and in one macrocytes and shadows. Poikilocytosis appeared once in an infant. In other words, the red cells presented nothing which might be considered characteristic of measles. The average percentage of hemoglobin was ninety per cent. The color index varied from 0.60 per cent. to 1.17 per cent. The blood plates and fibrin were somewhat decreased. In five cases a temporary increase of the blood plates was noted in the absence of any definite cause. There was no variation from the usual rapidity of shrinking and rouleaux formation.

The leucocytes presented the most interesting changes. There was invariably a decrease of the leucocytes at the height of the disease. During the early days of the affection the leucocytes count is high in comparison with the count in normal adults, but low in comparison with the count in normal children and the count observed later in the course of the disease. They increase gradually with the disappearance of the rash, and reach the highest point with the total disappearance of the eruption. Complications, such as bronchitis, adenitis, otitis media, etc., invariably increased the leucocytosis. Nephritis seemed to have no influence on the leucocytes. In four cases a decrease took place with the recurrence of the eruption and increase in temperature. The polynuclear neutrophile cells show an increased percentage in the beginning of the disease (seventy-six per cent. to eighty-two per cent.). This, however, is not an absolute increase. There is no increased activity on the part of the bone marrow until later in the disease. The large lymphocytes varied from 1.5 per cent. to 2 per cent., while the small lymphocytes varied from 2 per cent. to 31 per cent., the latter being increased markedly with the disappearance of the eruption. The transitional form varied from 0 to 14 per cent. from the same cause. The eosinophiles were found in very small numbers. Leucocytosis occurs in these cases only in the presence of complications, especially at the height of the disease and

in complications of the respiratory tract. Glandular complications manifest themselves in the blood through a lymphocytosis.

[TO BE CONCLUDED.]

Leucocytosis as a Point of Prognosis in Appendicitis.—JOY and WRIGHT (*Medical News*, April 5, 1902) report their observation in a series of cases of appendicitis, with special reference to the leucocyte count. They consider the leucocytes the best indicator of the true nature and course of the case. They conclude that the leucocyte count is a valuable aid to prognosis in appendicitis, distinct from its diagnostic value. A high stationary or an increasing count indicates a morbid condition of increasing severity, which demands operation regardless of the clinical symptoms. A low stationary or decreasing count indicates that the severity of the case is abating, and that operation may be safely postponed. Cases in which a falling count is accompanied by unmistakable signs of a generally bad condition form the rare exception to this rule, and in them there is no chance of error. No arbitrary set of prognostic values to be assigned to various degrees of leucocytosis can be constructed. The important point is to follow any scheme in which one learns to have confidence, provided the essential principles be preserved. The count indicates when the operation should be performed for the best interests of the patient. Circumstances often render it desirable to postpone operation in appendicitis. Study of the blood count enables it to be determined whether this may be done with safety and often renders such postponement permissible.

Concerning a Case Belonging to a Group of Leukemia-like Diseases.—MICHAELIS, Berlin (*Zeitschrift fuer Klinische Medizin*, Parts 1 and 2, 1902).—The points of chief importance in this case may be summed up in the following: The patient, a female fifty years of age, died within three months of an affection of the blood building organs. There was no enlargement of the lymph nodes; the spleen was large and soft, and the bone marrow soft. The blood contained, from time to time, normoblasts. While there was no absolute increase of leucocytes, there was a marked discrepancy in the relative number of the leucocytes to one another. There were scarcely any but lymphocytes to be found, the large ones being vastly in the majority. There were about seven per cent. of mononuclear neutrophile cells—the myelocytes of Ehrlich. No other leucocytes were in evidence. The bone marrow was made up largely of lymphocytes and giant cells—few myelocytes. The spleen presented practically the same microscopical appearance. In the lymph nodes and in the liver and kidneys there were bone-marrow giant cells. Much difficulty is encountered in the classification of such a case. It certainly resembles leukemia, but there is much doubt as to the type of leukemia to which it belongs. Comparison with the types described by Pinkus and others fails to reveal the class to which this case may be assigned.

Agreement Between the History of Yellow Fever and Its Transmission by the Culex Mosquito (*Stegomyia* of Theobald).—FINLAY (*Journal American Medical Association*, April 19, 1902).—The history of yellow fever enables us to establish a very plausible connection between the earliest undoubted epidemics described in the seventeenth century and the previous ones, under the names of plague, pestilence, etc., which attacked the Spaniards at various points ever since the conquest of Mexico in 1519. Since the American Indians have no natural immunity against the disease, and it had never been known to Europeans before coming to America, there must have existed, before the discovery, endemic foci on this side of the Atlantic. The final confirmation of the role which the culex mosquito plays in the transmission of yellow fever has been sanctioned by the experiments of many authorities on the subject. It is now possible to determine the conditions which are necessary for the development of yellow fever as

an epidemic in a given locality, not too highly situated above the sea level, and where temperatures between 77° and 95° F. prevail. In some of these localities the yellow fever mosquito belongs to the fauna of the place, and in others that species does not habitually exist. The endemic foci, from pre-Columbian times to the seventeenth century, lay within a zone between the twentieth and eighth parallels of north latitude, and from east to west between the Atlantic coast and the Leeward Islands. In the seventeenth century that zone extended both northward and southward. The mosquitoes were transmitted from place to place by sailing vessels, and several severe epidemics in 1494 in Santo Domingo and the Canary Islands were attributable to this fact. Not only contaminated mosquitoes but healthy ones were transported to subtropical countries, where they have become acclimated, as in the south of Spain, coasts of the Mediterranean, etc. This would constitute a dangerous complication if yellow fever cases were introduced into these localities. The Andes have stood as a barrier protecting the western coast of America from the contaminated mosquitoes. This barrier will have been removed when the Panama or Nicaragua canal is opened. The existing foci of the disease should be extinguished before that time.

Simple Cylindruria Produced by the Artificial Production of Biliary Stagnation.—WALLERSTEIN, Moscow (*Berliner Klinische Wochenschrift*, April 7, 1902), ligated the ductus communis choledochus in a number of young dogs, and observed the effects of the biliary stagnation upon the kidneys and urine. At no time during his observation of these animals did albumin appear in the urine. The bile pigments were found about forty-eight hours after the ligation of the duct, and continued to increase in quantity from this time. During the first two days there were no visible microscopic changes in the urine. On the third day, however, there appeared, in small numbers, epithelial cells, granular casts, kidney cells and white blood corpuscles. On the fourth day perfect hyaline casts were found. There was a marked polyuria in every case after about the third day. Special attention is called to the fact that in all of these experiments there appeared in the urine first epithelial cells and granular casts, and then hyaline casts in transitional stages and perfectly developed. According to Blumenthal, the hyaline cast is the end result of cast formations, while the epithelial and granular casts are simply incomplete, transitional forms. The examinations of the urine and the kidneys in post-mortem in all these experiments leads the author to the conclusion that it is possible to produce a pure cylindruria through experimental icterus, and that the urinary casts are, as Senator has maintained, developed from the epithelium of the uriniferous tubules. Inasmuch as there was at no time albumin present, Ribbert's theory, that casts are due to the coagulation of albumin in the tubules, is without ground.

Meniere's Disease, with Report of a Recovery.—GESCHEIT, Budapest (*Berliner Klinische Wochenschrift*, No. 14, 1902) reports a case of Meniere's disease in which a cure was effected through the employment of galvanization. The point of greatest importance in dealing with such cases is that of differential diagnosis. The author excluded epilepsy, diseases of the brain, neurasthenia, and Trousseau's "vertigo a stomacho laeso," as a possible cause of the vertigo in this case. Though the patient was a neurasthenic, there seemed to be no connection between this and the symptoms in question, for there were certain ear symptoms that could not be explained through the existence of neurasthenia. There existed also in this case a chronic inflammation of the tympanic cavity. This too seemed to be independent of the Meniere disease, inasmuch as this persisted even after the vertigo, etc., disappeared. This was a case of Meniere's disease characterized by deafness, permanent tinnitus, vertigo, vomiting, and often unconsciousness. It is very difficult, in fact, often impossible, to locate the anatomical basis of this disease. It is pretty generally agreed, however,

that it is due either to an inflammatory process, or to a transudation or hemorrhage into the vestibule and the semicircular canals. The author is of the belief that in his case it was due to a transudation. The various forms of treatment usually recommended were employed without effect. The desired results were only attained when he began the use of the galvanic current. Application of a moderate current (three to four milliampere) was made for three minutes every other day. The positive pole was placed on the tragus of the affected ear, and the negative over the cervical vertebre. Improvement was noticed after the second application, and after twenty-five he was practically cured. The hearing improved, the vertigo disappeared, and the gait became certain.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Basedow's Disease.—KOCHER (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, Bd. ix., Hft. 1 und 2).—This is a most splendid article of 304 pages, complete in every detail, and in it is reviewed the work which has been done in this line, at Berne, since 1883. In all there were the uncommon number of ninety-three cases treated, not all having been operated upon, however. The onset of the disease was in far the greater number of cases gradual; the patients hardly knew just when it did begin. A hereditary factor was noted in most instances; if not Basedow's disease, then some decided nervous predisposition or other. As far as sex is concerned, the malady manifested itself, as might have been expected, much more frequently in women than in men. Many pages are devoted to a consideration, in all their details, of the complex symptom picture which enables us to recognize this disease. The operative indications are ligation of the vessels which supply the diseased portion of the thyroid, or excision of that part of the gland itself; by diseased is meant that series of changes in the organ, which make themselves known in pulsation of it, a swish heard in its vessels, the vessels being seen to be enlarged, or felt as enlarged. Often a patient who is in a highly nervous state must be subjected to quieting treatment for a time before operation is advisable. No disinfectants are to be used on the patient's skin, since it resorbs so much as to expose the sufferer to the additional danger of being poisoned. Such operations are to be done under local anesthesia exclusively, for well-known reasons. Post-operative psychoses of the most alarming nature are not infrequently seen, though their actual danger may be overestimated. The results in the Kocher clinic were of the most gratifying nature, cure being effected in seventy-six per cent. of all cases which were operated upon, while improvement was noted in an additional fourteen per cent. A second operation was necessary in some instances. The amount of work done in the preparation of this article, and the extent of the ground covered, can be inferred from the fact that the author quotes 1423 literature references; the younger Kocher bids fair to be a worthy successor of his brilliant father.

Notes on Gastrostomy.—TERRIER and GOSSET (*Revue de Chirurgie*, No. 2, 1902).—The authors have operated upon eight cases during the past few months, and their review of the same has especial reference to two points: First, the technique and second the results. The proper incision is a vertical one, over the middle of the left rectus muscle. Less injury is done thus, and at the same time a long track is established, which would not be the case if muscles were merely

separated. The nerves to the rectus are not to be divided, else the sphincter action of that muscle will be impaired. After the stomach wall has been caught up into a sort of cone, four "U" sutures are introduced, uniting it to the peritoneum and posterior sheath of the rectus muscle. Then four more similar sutures fasten it to the anterior layer of the same sheath, after which the serous and muscular coats are incised, allowing the mucosa to herniate itself. This latter is then opened and sewn to the skin all the way round, the redundancy of it acting as a plug to the new opening.

One patient died from the operation, while the remaining seven lived from seventeen days to nine and one-half months after the same. There is perfect continence in all but two. To possess this latter virtue, such a fistula must be small, high, long, have the sphincteric action of the rectus muscle, and at the same time be closed by the so-called obturator of stomach mucous membrane.

Changes in the Kidneys After Operations Within the Abdominal Cavity.—V. BRUNN (*Archiv. fuer Klinische Chirurgie*, Bd. lxx., Hft. 1).—In all cases and under all circumstances which force the kidneys to eliminate large quantities of poisonous substances, the epithelium lining the convoluted tubules is necessarily injured. In support of the conclusions to be drawn later, the author relates eleven cases in which there was a laparotomy followed by peritonitis, two cases in which no peritonitis succeeded such an operation; in all of these there was, however, necrosis of renal epithelium. Further are cited six cases of laparotomy where there was no peritonitis and no necrosis. The kidney disease is shown by v. Brunn to be neither the result of the laparotomy as such, nor of a fatal intestinal operation *per se*, nor of chloroform (in his cases), nor of local peritonitis, nor of putrefaction. He concludes from the mass of evidence at his command that general disease of the peritoneum brings it about.

Extrophy of the Bladder Cured by Maydl's Operation.—ESTOR (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, Tome xxviii, No. 6).—The author had a case presented to the society, in which he had performed this most difficult operation, with a result that was satisfactory in every particular. The procedure is divided into five steps, as follows: 1. The bladder is excised. 2. The ureters with the trigonum are mobilized. 3. An incision is made into the rectum. 4. The trigonum is sewn into the slit in the rectum. 5. The abdomen is closed. In the case at hand, it is interesting to note that the escape of urine from the rectum was by no means steady; on the other hand, it was voided about once every hour, under usual circumstances.

An Experimental and Clinical Research on the Temporary Closure of the Carotid Arteries.—CRILE (*Annals of Surgery*, April, 1902).—The injury inflicted upon the coats of a vessel in temporary closure of the same is commensurate with the pressure put upon it, the length of time it is compressed, and with the amount and extent of wound infection. In the nineteen dogs upon which the author experimented, the carotids were closed often from twenty-four to forty-eight hours without any ill-effects. An original screw-clamp was used; it consisted of steel covered with rubber. The Trendelenburg position is advocated, in order that venous stasis may in part make up for the cerebral anemia produced by the arterial closure. The author has made use of the procedure on eighteen human subjects; in ten both carotids were closed, and in eight but one was so treated. There was no death directly due to the operation; there was, further, no permanent effect upon the vessels or upon the circulation. The time of operating was greatly lessened as well as the amount of hemorrhage lessened, so the procedure can be said to have been of decided advantage. Atropine was used with effect, to prevent cardiac inhibition resulting from irritation of the vagus nerve, and this idea was further carried out by blocking the nerve with cocaine during the operation.

A Very Early Symptom of Exudative Pleurisy.—PRZEWAŁSKI (*Centralblatt fuer Chirurgie*, April 5, 1902).—The author refers to an observation which he has made in nineteen of these cases, fourteen of them serous and five of them purulent. He has noted that the intercostal spaces are very early narrowed, and that the resistance of the tissues filling those spaces is decidedly increased. This he attributed to a tonic contraction of the internal intercostal muscles over the affected area, in very much the same way as the muscles surrounding one of the joints of an extremity contract when the joint becomes the seat of an inflammatory process.

The Treatment of Genital Tuberculosis in Men.—AUDRY (*Archives Provinciales de Chirurgie*, Tome xi, No. 3).—If there is disease of the scrotal contents the author operates when the bladder is not involved, or if the lungs are not too extensively affected. He believes that the patient should be castrated when the tuberculous process is very acute, or when it has rapidly reached any marked extent. Audry never does a partial operation for disease of the epididymis, preferring typical removal of the same. An atypical or partial procedure on the testicle is admissible, however, in case there be but one organ, or where there is danger of the serious mental effect which not infrequently follows this form of mutilation. The vas deferens should always be severed by the use of the thermo-cautery, as there is a certainty of infecting it if the instruments which have been employed in exposing a tuberculous focus are brought in contact with it. Tuberculosis of the prostate has been successfully treated by the author at a secondary operation, after he had first operated upon the scrotal contents.

The Rational Procedure for the Removal of Foreign Bodies From the Lower Portion of the Esophagus.—V. HACKER (*Beitraege zur Klinischen Chirurgie*, Bd. xxxii, Hft. 2).—The vast experience of the author in this field makes anything from his pen well worth reading. He opens by saying that an "X-ray" of such a patient is of value only when the individual lies half on the side, since the shadow of the vertebræ must otherwise obscure the field. In an adult it is impossible to bring the tips of two fingers together if the one hand be introduced through the stomach and the other into the esophagus through a wound in the neck. For examination of the tube by way of the cardia, a median abdominal incision gives the best general results, though this route has not been always chosen by any means. The difficulty of this procedure must differ in the various cases, since it is influenced by the length of the thorax, by the size and position of the liver, as well as by a number of other factors. In fact, a foreign body is always to be removed from above by the aid of the esophagoscope, unless it be *very* near the cardiac orifice. With the abdomen open, one can usually gain much knowledge upon this point before the stomach has been opened, and then if a stomach wound is found desirable at all it will be found to injure the vessels less, if this be made across the longitudinal axis of the organ.

A Case of Double Rachitic Coxa Vara.—GEVAERT (*Journal de Chirurgie et Annales de la Societe belge de Chirurgie*, No. 1, 1902).—The patient was a boy of eight years, in a moderately good state of nutrition. The most pronounced symptom was in the limitation of abduction, this being true of both sides. Flexion of both sides was normal, inward rotation somewhat limited on both. There was no other external mark of rachitis on the skeletal system. The child could walk or play with no more fatigue than others of the same age; there were none of the usual sensitive or painful areas. The diagnosis of coxa vara was verified by the X-ray examination.

Remarks Concerning the Practice of Aseptic Surgery.—MCBURNEY (*The New York Medical Journal*, March 22, 1902).—A small number of germs are sure to

gain access to every wound even under the most ideal aseptic conditions, hence it becomes our duty to keep in mind the fact that our chief aim must be to leave tissues in the best possible condition for self-defense. It is a delight to read how strongly so distinguished a surgeon as McBurney indorses rubber gloves as the best possible way of rendering the hands aseptic. By their use the tissues suffer less in being handled than would be the case were the rough hands used. Most of the objections to their use are purely theoretical; as to cutting them in an operation, no surgeon would be more likely to do it than he would be to cut a large vessel; of course, both accidents are possible though and do happen. If everything we use has been made aseptic, then it becomes usually a matter of the tissues having been improperly handled, that is, left in no condition for self-defense, if infection ensues upon an operation. So there must be no tearing and crushing, no use of powerful antiseptics, if we would see ideal results. Septic wounds should receive the same care as others, else the best results will not be attained. The safety of modern surgical procedures should not make one careless of diagnosis; this is a matter of even greater importance than formerly, when less was expected of the surgeon, hence less good expected.

Operations Under Regional Cocaine Anesthesia.—ISRAELSON (*St. Petersburger Medicinische Wochenschrift*, March 15, 1902).—As an example of this method one cannot do better than recite the manner in which a paronychia on the finger is to be treated. First, a rubber band is to be thrown around the base and then a one-half per cent. cocaine or a one per cent. "B" eucaine solution introduced. Three punctures are to be made over the first phalanx, one on either side, the needle being so directed as to block the nerves which run on either side of the flexor tendon, and the third injection should be into the tissues on the dorsum of this same phalanx. Thus one affects the entire nerve supply to the finger, and after waiting five minutes the part will be found to be completely insensible. The entire hand and foot may be treated in like manner by knowing just where to find and block the nerves, information which is given in detail by the author. The method has its indication in inflammatory conditions where the Schleich infiltration can, for obvious reasons, not be made.

The Changes in the Portion of Intestine Immediately Above a Stenotic Area.—PATEL (*Revue de Chirurgie*, No. 3, 1902).—This portion of the gut is dilated and has its wall of the usual thickness or possibly thinned when the obstruction lies extra-parietal. Under these conditions a slight degree of hypertrophy may take place, but only when the obstruction has persisted for a long time. But when the obstruction is parietal a very different state of affairs comes about. Now, hypertrophy commences at once, as seen when a tuberculous ulceration of the mucous membrane leads to constriction. On the other hand, narrowing from the presence of a myoma leads to no such changes, it is only when the mucosa is affected that we see such. A microscopical examination of such intestines has taught the author many valuable lessons. This thickening of the wall of the viscus is brought about merely by an infiltration of the muscular and fibrous coats. There is in reality no growth of muscular elements, hence the affair cannot be regarded as a compensatory hypertrophy. So the gut can be regarded as only diseased, and the operative indication is here, as elsewhere, to operate in healthy tissue; that is, to remove the thickened portion.

A New Conservative Operation on the Testicle.—RASUMOWSKY (*Archiv fuer klinische Chirurgie*, Bd. lxxv, Hft. 3).—Tuberculosis of the scrotal contents is, in the beginning at least, limited to the epididymis, hence ablation of all or part of that structure answers every purpose. Furthermore, the disease often appears on both sides at once, hence castration as a routine practice were little short of criminal. With the epididymis removed and no passage left for the semen, still the organ is of worth for its internal secretion. The author believes that this

has an effect on the matter of successful cohabitation. He has tried four times upon the human, to accomplish what has been done upon the dog, viz., the establishment of a communication between testicle and vas deferens, after removal of the epididymis. This is done in two different ways, the first of which is as follows: 1. The organ is resected, the vessels to the testicle being carefully protected. 2. The lower end of the vas is split and the inner epithelial surface sutured over the opening which has been made into the gland; the tunica propria of the testicle is next made to cover and invaginate the new communication. 3. The membranes and skin are reunited. The other method is as follows: 1. Partial removal of the epididymis. 2. Invagination of the divided vas into the slit remainder of the epididymis. 3. Closure of membranes and skin.

Direct Surgical Intervention in an Aneurism of the Arch of the Aorta.—TUFFIER (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, Tome xxviii, No. 10).—The patient, a woman of forty years, had suffered at first from what was supposed to be intercostal neuralgia high up on the right side. Next a small pulsating tumor made its appearance between the second and third costal cartilages on the same side. Now an aneurism was apparent, and from the fact that the two radial pulses were alike, it was considered that it could have its origin, if from the aorta at all, only from that part between the heart and the innominate artery. Certain manifestations led the author to hope that it was a sacular tumor, hence after much study he determined to attempt to ligate it. A flap was made with its base on the sternum, and then with the exercise of the greatest care he succeeded in completely isolating the aneurism from all surrounding tissues and organs. When this was accomplished it was seen that it was indeed of sacular form, and hence it was easily possible to place a double catgut ligature around its neck. No untoward symptoms followed till the thirteenth day after operation, when the patient suddenly died of hemorrhage, which an autopsy showed to have been due to gangrene of the sack, this having been left in place after the ligation. It was further demonstrated that the diagnosis had been correct in every particular.

A Contribution to the History of Gelatin as a Hemostaticum.—MIWA (*Centralblatt fuer Chirurgie*, No. 9, 1902).—This subject was first mentioned in European literature in the middle of the last century, but the matter is in reality by no means so recent. Gelatin was used thus by the Chinese and Japanese as early as the second and third century after Christ. It was prepared from the hides of cattle and in the form of a powder or in that of a solution was blown into the nose to stop hemorrhage from that organ. Nothing was known of the subcutaneous or intravenous use of the material, but in addition to the application above mentioned, it was used also for bleeding from the rectum, vagina, mouth, lungs and urethra.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

French Methods of Reducing Fat.—E. H. KISCH (*Therap. Monatsh.*, No. 1, 1902).—The writer discusses in some detail the methods in use among French physicians of treating obesity. Daucel still upholds the now pretty generally discarded "thirst-cure." He considers pure water as the most harmful of drinks. The amount of fluid permitted an obese patient who desires to lose weight should not, according to Daucel, exceed 800 g., exclusive of two small cups of black

coffee, daily. According to our modern point of view, however, such a restriction of the amount of fluids taken in by obese patients cannot be universally or strictly carried out without grave danger. A "thirst-cure," like a "hunger-cure," may, to be sure, cause a rapid disappearance of fat, but the organism as a whole is seriously weakened at the same time. According to Kisch, this diminution of the amount of water consumed is distinctly contraindicated in the plethoric form of obesity—*i. e.*, the great majority of cases to which gourmands, the hereditary obese, alcoholics and women during the climacteric. It may be used to advantage, however, in anemic cases in which the hydremia seems to stand in some etiological relation to the obesity. The particular field for the systematic withdrawal of water, however, lies in that group of cases of obesity in which besides a hydremia, a pronounced degeneration of the myocardium has taken place. In such cases the cardiac insufficiency and the congestion of various organs can best be relieved by a procedure that diminishes the total fluids of the body.

Albert Rodin divides obesity into two classes according as the amount of urea excreted is greater than the normal or not. There would thus be two kinds of obesity, one in which cellular activity is increased and one in which it is diminished. The former group is characterized by an excessive nutrition and assimilation, the latter by the reverse. The treatment depends upon the group with which any given case is classed: those with excessive metabolism are forbidden to drink much water, whereas those with defective assimilation are encouraged to drink.

Germain See, on the other hand, advises all obese patients to drink plentifully, especially of coffee and tea. He has them drink warm tea at breakfast, and between meals water, lemonade and acid mineral drinks. As regards nutrition, he prefers a *regime* in which proteids and fats are combined in the normal proportions, *i. e.*, about 120–130 g. albumen and 60–90 g. fats daily, but in which the amount of carbohydrates is considerably diminished. Vegetables may be eaten *ad libitum*.

Bouchard emphasizes the importance of diminishing the amount of fat allowed an obese patient as the best means of obtaining a condition of under-nutrition. In order to obtain such a condition of diminished nutrition without at the same time depriving the organism of the quantity of proteids, carbohydrates, salts and fats necessary to health, he recommends that milk and eggs be made the mainstay of such a dietary, provided that they be not given in such quantities as to cause the income of the body to exceed its outgo. He prescribes for an average patient 1250 g. milk and five eggs divided into five meals; no other food or drink is permitted. The regimen continues for twenty days, and should produce a daily loss of 300–350 g. of body weight, in all some six to seven kg. This is followed by a period of several weeks during which the patient is permitted a somewhat more varied but still frugal bill of fare. In order to increase the metabolism he uses dry and aromatic skin friction, cold baths, sea-bathing, occasionally hot baths and other hydropathic procedures.

Dujardin-Beaumetz inclines to the Oertel-Schwenninger regimen. His dietary permits 55–60 g. albumen, 30–40 g. fat and 95 g. carbohydrates. As regards fluids, he permits the patient to drink 300 g. during each meal; if, however, the patient abstains from fluid during meal time he may drink considerably more. He forbids absolutely liquours, brandy and beer, but occasionally permits a cup of black coffee after breakfast. As regards foods, those containing much water, especially soups, are forbidden, whereas eggs, fish, meat, green vegetables are preferred. Those varieties of bread that contain much crust are permitted, whereas sweet cake is forbidden.

Proust and Mathieu divide their dietary for obesity into three stages. The first contains the number of calories necessary to maintain the normal body in a condition of unchanged weight. It contains 100 g. proteid, 45 g. fat and 320 g.

carbohydrates when the body is at rest; if much exercise is taken, 110-120 g. proteid, 50 g. fat and 400 g. carbohydrates. This dietary will produce a decrease in weight in patients who have been accustomed to a very rich diet. If it does not produce the desired result, they proceed to the second stage, consisting of 100 g. proteid, 45 g. fat and 300 g. carbohydrates; and if this does not suffice, the third stage, consisting of 100 g. proteid, 30 g. fat and 135 g. carbohydrates, is entered upon.

Dumont prescribes the following dietary for the usual type of obese patients, 25 to 40 years old and threatened with fatty heart. Articles usually permitted: clear soups, especially with *finer herbes*, fried red meats, roast beef, smoked tongue, ham, kidneys, boiled meat, white meat, fowl, veal, rabbit, fish, oysters, green vegetables, lettuce, asparagus, artichoke, cress, radishes, champignons, raw and stewed fruit in large quantity; as regards drinks, tea, skim-milk, one bottle of light wine daily.

Foods permitted but only in small quantity and occasionally: bread, crackers, pork, fat fish (such as eel, carp, herring), brain, sweet-bread, caviar, preserves, spice, vinegar, cake, bouillon, eggs, butter, cheese, rice, cauliflower, carrots, spinach, tomato, celery, potatoes, ice cream, figs, nuts, light beer, rich milk, coffee, champagne, liquor.

Forbidden foods: sweets, hot bread, macaroni, tapioca, sago, thick soups, fat meats, ragouts and the like, gelatine, liver, oil, rich gravies, sugar, honey, chocolate, pudding, syrup, dark beer, sweet wines, cognac, etc.

He advises that only three meals daily be taken and nothing be eaten between meals. The total amount of fluids should not exceed one liter daily. Of bread not more than 200 g., meat 300 g., fruit and vegetables 500 g., are permitted daily. Moderate exercise and stimulating hydiatic procedures are advised. Smoking is forbidden. The patients should not sleep after meals, and only seven to eight hours at night.

At first sight the diversity of the procedures recommended by the various authorities is most confusing especially when compared with the German methods (see the previous number of this journal). Doubtless all of these men have had good results with their procedures. The kernel of the matter seems to be that the treatment of obesity depends essentially upon the individual patient. The method must always consist in making the outgo of the economy exceed the income. But whether the chief attention is devoted to increasing the former by means of exercise, massage, hydiatic procedures, etc., or to diminishing the latter by means of a stringent dietary, must depend on the nature of each individual case. One thing, however, seems certain, that the discomforts and dangers attending a rigid restriction of the fluids taken into the body are so great that this method should be used very cautiously if, at all.

Aspirin.—KARL GASSNER (*Klin.-Therap. Wochenschr.*, No. 51, 1901; *Centralbl. f. d. Ges. Therapie.*, No. 4, 1902). JØRGEN THESEN (*Die Heilkunde*, No. 2, 1902).—Among the more recent medicaments few are becoming more popular than aspirin. It consists merely of salicylic acid in which one atom of hydrogen has been replaced by an acetyl group. The latter changes the substance in so far as to make it quite insoluble in acid menstrua, whereas alkaline fluids break it up into salicylate and acetate, both of which influence favorably rheumatic and allied conditions. Accordingly, aspirin ordinarily passes through the stomach entirely uninfluenced by its acid contents, and is broken up and absorbed only after reaching the intestine. This accounts for the observation that it usually does not produce the gastric and other disturbances so often met with in the administration of the salicylates. Occasionally, however, in cases of pronounced anacidity, or if taken immediately after eating when the gastric contents are alkaline, it may be split up in the stomach and produce disturbances there. In

such cases small amounts of HCl may be administered with it or it may be given at such times when we may expect the gastric contents to be acid.

Gassner usually prescribes the drug as a powder in wafers or in tablet form. He uses it not only in cases of acute and chronic rheumatism, neuralgias, sciatica and gout, but also in febrile conditions. Its effects were always strikingly good, often distinctly superior to those produced by sodium salicylate. In influenza the pains yielded promptly, the general condition was improved, and the duration of the illness seemed markedly shortened. In mild cases he prescribes 1 to 2 g. every evening, this is usually followed by a quiet sleep and by prompt recovery. In more severe cases, 3 to 4 g. daily, usually given in the afternoon and evening, are necessary. The author ascribes the satisfactory effect of aspirin firstly to the fact that the unpleasant secondary disturbances characterizing the salicylates are avoided, and secondly to the observation that aspirin does not depress the heart. The observation of Philippi, that aspirin is excreted more slowly than the salicylates, would explain its prolonged effect as compared with the latter. As regards diaphoresis, aspirin seems less efficient than sodium salicylate.

Its superiority over its allied drugs as an analgesic is also striking. This is especially shown in cases of acute articular rheumatism and of neuralgias, especially of the trigeminal and intercostal type, where one or two doses of 1 g. each sufficed to produce relief. In acute sciatica Gassner always obtained satisfactory results; this was, however, less the case with the chronic form. In acute gouty attacks aspirin cut short the pain very promptly, but here 3 to 4 g. pro die must be given. A coryza may be aborted if 1 g. is taken at bed-time; if the coryza be already pronounced, aspirin will shorten the duration of the attack. In such cases 1 to 2 g. at bed-time usually suffice.

Thesen has used aspirin on a large material at the government hospital in Christiania. He found it useful wherever the salicylates were indicated, especially in polyarthritis and pneumonia. In afebrile rheumatoid affections and in cardiac complications it was, however, just as inefficient as sodium salicylate. He had very satisfactory results with aspirin in pleurisy: the exudate was absorbed more rapidly than with any other drug and the duration of the disease seemed unmistakably shortened.

The abstractor can unhesitatingly endorse the findings noted above. Only as regards the absence of a depressing influence upon the heart must he differ with Gassner. In a number of cases in which 3 to 4 g. were administered daily, cold sweats and a feeble pulse appeared, just as after the use of large doses of the other coal-tar antipyretics.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

Coccidium Infection of the Rabbit's Liver.—E. E. TYZZER (*The Journal of Medical Research*, April, 1902).—This disease is of common occurrence among domestic rabbits. In some rabbitries the large number of the animals are affected to greater or less degree. The object of this investigation was to throw light on the nature of the coccidium infection, especially as regards tumor formation. Tyzzar found that parasites, of varying form and character, are found in certain lesions of the liver of the rabbit. The various forms represent the life cycle of a definite species of Sporozoon, coccidium oviforme. The necessary stages of the life cycle are traceable. In only one stage does the parasite resemble the cell-inclusion of cancer. Even this stage presents a definite and con-

stant morphology. The immediate effect of the parasite upon the host is to produce degeneration and destruction of the epithelial cells of the bile ducts. Secondary to this, the effects of irritation are seen in the proliferation of connective tissue and epithelium. The more remote changes are those of cirrhosis. Repair is effected through the walling off of the process by connective tissue, by the destruction of the remaining parasites, and finally by cicatrization.

There is no well-founded analogy between the cell-inclusions of cancer and any one of the stages in the life history of coccidium oviforme. The lesion is of the nature of a chronic inflammatory process, the tissues reacting to the irritation which the parasites cause by their presence in the bile ducts. Repair takes place when the irritation is removed. It is a kind of physiologic process and has nothing in common with new growths. No metastases are formed. The process is self-limited and repair follows the destruction of the parasites.

Molluscum Contagiosum.—CHARLES J. WHITE and WM. H. ROBEY (*The Journal of Medical Research*, April, 1902).—These writers give an interesting review of the literature bearing on the subject of molluscum contagiosum, setting forth in detail the numerous theories that have arisen concerning the true nature of the process. They give an account of the work of those who believe in the follicular or sebaceous origin of these tumors. This was the theory of Virchow, Rokitan-sky, and Kaposi. Bizzozero, Klebs and Unna believe that the tumors originate from the rete Malpighii. Some believe that the disease is contagious, such as Vidal, Virchow, Bizzozero and many others. Others claim, however, that it is non-contagious. Kaposi denies that it is a contagious process. Virchow and others after him have asserted that the bodies found in the tumors, and which can be expressed by pressure, are degenerated epithelial cells. Klebs, Benda and Neisser assert that the bodies found in these tumors are parasites. Angeliucci described in 1881 a bacterium—the bacterium lepopenum—which he claimed was the cause of the new growth. In 1882, Neisser denied this and claimed that the specific cause of the tumor was a gregarin, and claimed, further, that the peculiar bodies were the shells of these organisms.

White and Robey studied several hundred sections cut from tumors sent them by Drs. Stelwagon and Shepherd. They describe very accurately the minute changes in the tumor. The new growth is formed by a hyperplasia of the rete cells which push the mass downwards and outwards, thus producing a globular tumor. Very often the growth is the result of a combination of two or three down-buddings of the rete Malpighii. The lowest layer of cells present characteristics of quasi-normal spinous cells described in the surrounding skin. These cells stain deeply and are nucleated. Others are present which are not nucleated and are composed of fibrillary protoplasm. Above these cells are others which have lost their primary shape, having their nuclei distorted and becoming masses of reticulated protoplasm, receiving only the basic colors.

The so-called molluscum bodies were found to be simply keratin, identical with the horny layer, except in the shape of individual cells. These abnormal conditions cannot be called colloid or hyalin degeneration, for the staining reactions throughout the depth of the tumor were normal, or show a rather extraordinary metamorphosis of rete cells into normal keratin.

The bacteriologic results in these cases were obtained by excising pieces of the tumor with antiseptic precautions, sowing them in bouillon and sealing the tubes with paraffin. These starch-like granules spoken of before were squeezed out and put into bouillon tubes. A special medium made of human skin was also used with the idea of producing artificial growth conditions somewhat like those enjoyed by any bacterium that might be the cause of molluscum contagiosum. The medium was made of finely chopped human skin, free of fat. The only organism found by all the means used was the staphylococcus epidermidis albus of Welch.

The conclusions of these writers are that no one has so far found any parasitic cause of the disease, and that the change is not a colloid or hyalin degeneration, but rather an extraordinary metamorphosis of rete cells into keratin.

Culture Experiments with Malignant Tumors, 1900-1901.—OSCAR RICHARDSON (*Journal of Medical Research*, April, 1902).—This is a continuation of the report of 1899-1900 of the research work done in regard to culture experiments with carcinomatous tissue. The cultures were made from material obtained in the Massachusetts General Hospital, in most cases, as soon after operation as possible. The method of taking the culture material from the new growth is essentially that already described, excepting that the writers used a glass tube with a rubber bulb at one end, which enables one, by pressing the bulb and introducing the free end of the tube into everted pulpy semi-fluid mass of the new growth, to suck up into the tube any desired quantity of the fluid. The tube and bulb are easily sterilized.

Media used: Bouillon and agar made from human liver; tartaric acid glucose bouillon (recommended by Sanfelice for the cultivation of so-called blastomycetes); litmus milk; Dunham's peptone solution. A table is given by these writers showing that growth was negative in every instance, both under aerobic and anaerobic conditions, employing all these different media. All of the cultures were observed for at least fifteen days and some for months. They were subjected to regular macroscopic and microscopic examinations, and from many of them subcultures were made.

The result of these investigations confirms the report of the previous experiments—*i. e.*, that it is impossible to cultivate from the tissues and fluids of malignant new growths anything which can be regarded as a specific infecting organism.

The Relation of Blastomycetes to Cancer.—E. H. NICHOLS (*The Journal of Medical Research*, April, 1902).—Nichols reviews the literature on the so-called parasites of cancer, and sets forth in extended detail results obtained by him in looking for organisms in malignant growths. He made an accurate examination of the lesions produced by the inoculation of animals with Sanfelice's "neoformans" and with the organism ("saccharomyces") isolated by Plimmer from a human cancer. Nichols was furnished with a culture of these two organisms by these two investigators. Each organism was transferred to various media and grown in pure culture. Eighteen animals were inoculated with Sanfelice's "neoformans" and twelve with Plimmer's organism. Of the animals inoculated with the "neoformans," six were rabbits and the others guinea-pigs. One animal inoculated with Plimmer's organism was a rabbit, the rest being guinea-pigs. It was seen that certain blastomycetes can live and multiply in human and animal tissues, produce local lesions and metastases in the internal organs—*i. e.*, they are pathogenic. The lesions produced in animals by spontaneous infection with blastomycetes are acute inflammations, abscesses or nodules, composed of peculiar granulation tissue, and are not in the least analogous to cancers. The lesions produced in human beings in cases of spontaneous infection with blastomycetes are acute inflammation (abscesses or ulcers) or proliferation of endothelium and connective tissue. At times a proliferation of the epidermis does occur, but this is not due to the action of the blastomycetes, but is secondary to the chronic inflammation of the underlying corium. The proliferation of the epithelium is not analogous to the proliferation of the epidermis in cancers, since no epithelial metastases occur.

Blastomycosis in human tissue is very rare. The lesions produced in animals by experimental inoculation with blastomycetes are, with the exception of Sanfelice's successful cases, inflammation or nodules of peculiar granulation tissue. Sanfelice's cases are not conclusive in themselves, are in direct opposi-

tion to the results obtained by others, and even if true, are logically explained as coincidences, and not as results. Blastomycetes have a slight toxic power and therefore produce marked proliferation of tissue, and little infiltration with leucocytes. Blastomycetes primarily extend along lymphatic clefts and vessels. Sometimes blastomycetes are taken into the blood vessels, disseminated throughout the body and produce a general infection and metastases. The secondary nodules have the same general character—*i. e.*, the formation of granulation tissue—as the original nodules. The morphology of the so-called “cancer bodies” is not identical with that of the blastomycetes. Blastomycetes are not constantly present in human malignant tumors and cancers. Even if they do occur in human cancers, they are not present in such numbers and in such a relation to the anatomical lesion as to justify the belief that they are the cause of the disease. All of these facts lead to the ultimate conclusion that there is no evidence that blastomycetes have anything to do with the production of human cancers.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Diabetes and Pregnancy.—ERNST HERMAN (*Edin. Med. Jl.*, February, 1902).—If diabetes occurs in a woman of child-bearing age, it usually suppresses menstruation, and often produces atrophy of the uterus. In some cases, however, menstruation continues; such patients may become pregnant. Since diabetes in young subjects is of a more severe type, those diabetic women who are still capable of becoming pregnant exhibit a dangerous form of this disease. Pregnancy aggravates it and hastens its progress. If diabetes becomes associated to pregnancy, *viz.*, if a pregnant woman becomes diabetic, the prognosis is more favorable, because the diabetes usually subsides after confinement. The effects of diabetes upon pregnancy and puerperium are extremely deleterious. In about two-thirds of the cases intrauterine death of the child was observed. Hydramnios is a frequent complication. During the lying-in death may supervene in the same manner as after operation, with the symptoms of coma and collapse. The obstetrical management of diabetes with pregnancy is a very difficult problem. The author believes that the termination of pregnancy, and that, too, at the earliest possible date, is the only course which can logically be followed.

Expulsion of Dermoid Ovarian Cyst per Vagina During Labor.—F. W. N. HAULTAIN (*Journ. of Obstr. and Gyn. of Brit. Emp.*, April, 1902).—Patient, 3-para, aged thirty-two, had been in labor for twenty-four hours, and the membranes had ruptured twelve hours previously to her admission to the hospital. An attempt at delivery by means of the forceps had been made, with the result that a mass had protruded from the vulva. On examination the mass was found lying in the vagina, and being grasped to pull down for inspection it became detached and was removed. Forceps was immediately applied to the engaged fetal head, and a living male child was easily delivered. The third stage presented nothing abnormal. A new examination revealed a rent in the posterior vaginal wall through which this tumor, a dermoid cyst, had been pressed by the advancing head of the fetus. The tear in the vagina was now packed with a strip of iodoform gauze. The progress of the patient was one of uninterrupted recovery. Gradually the strip was removed within the following four days. The author concludes this interesting report with a review of four similar cases known in literature. The practical conclusion drawn by the writer is, that in

cases of obstruction of labor by an ovarian tumor in the pelvis, the forcible delivery, *e. g.*, by means of the forceps, involves a great danger and should never be attempted.

Stab Wound in Gravid Uterus.—VORHEES LUCAS and N. McCABE (*West. Med. Review*, March 15, 1902).—Patient, aged thirty-five, multipara, in the eighth month of pregnancy, was stabbed by her husband. The wound in the abdominal wall was three inches long, beginning at median line, three inches above the symphysis pubis, extending upward and to the right, passed the uterine wall, making a one and a half inch opening, evacuating the amniotic fluid and cutting right arm of the fetus. Wounds in uterus and abdominal wall were sutured. About four hours later labor pains began, tearing out the sutures. Laceration of the uterus seemed imminent. Therefore Cesarean section was performed in the middle line in typical way. The hemorrhage was slight, the cavity of the uterus swabbed out with gauze and the incision closed with silk sutures. The wound in the abdominal wall was partly closed and a drainage left in the lower angle. Recovery was uneventful, the temperature only once going above 100°. Child alive. The writers consider their plan of treatment, which was entirely expectant in the beginning, justified by G. Gellhorn's review of eighteen cases of gunshot wounds of the pregnant uterus. [Gellhorn says, however, in the conclusions of his article: "From all the foregoing I would deduce the rule for treatment that in every case of gunshot wound of the pregnant uterus, *Cesarean section should be performed at once.*"—Ed.]

Shall We Operate Upon Myomata per Vaginam or per Abdomen?—A. MARTIN (*Centralbl. fuer Gyn.*, April 5, 1902).—In former times, when the indication for operation in myoma was alone found in an immediate danger of life, the abdominal way was the only feasible one. To-day the uselessness of almost all the non-surgical therapeutic measures is recognized; the danger of the operation, on the other hand, considerably reduced. According to modern understanding myomata are benign from the standpoint of the histo-pathologist, but not from that of the clinician. The degeneration of the heart muscle in cases of myoma of the uterus, malignant degeneration in the myomata and similar unfavorable complications are now well known. Therefore we must conclude that operation is justified in all cases in which the health or the ability of attending to work is noticeably impaired, and in which a medicamentous treatment has proven ineffective. For an operator who is guided by these reflections and who does not limit himself to the extirpation of large myomata only, the vaginal way is, in the majority of cases, the more preferable. Martin emphasizes how of late this view has taken root and is sustained by men like Fritsch, Thorn and others. The abdominal route should be adopted where adhesions with the adjacent organs may be assumed to exist from the history of the case (precedent inflammations), from the symptoms (localized pain), and from the examination (immobility of the tumor, changes on its surface). The limit for the less experienced in vaginal operations should be for the vaginal route, a tumor of the size of a uterus of six months' pregnancy. The operation is facilitated by the vaginal-perineal incision after Schuchardt (see April number of this journal, page 215). The vaginal route offers just as well as the abdominal, to the operator, the choice between conservative extirpation of the myoma or total extirpation of the uterus. If the author finds one or both ovaries in normal condition, he prefers to leave them. Out of 118 operations performed for myoma during the last three years the author operated per vaginam 87 times, removing the whole uterus in 35 instances (without mortality), and enucleating myomata in the remaining 52 cases (with two deaths from catgut infection).

Causes of Salpingitis Other Than Gonorrheal.—J. B. DEEVER and E. KEMP MOORE (*Am. Journ. of Med. Science*, March, 1902).—The proportion of cases of

salpingitis and pyosalpinx due to gonorrheal infection has been placed by various eminent authorities all the way from twenty to eighty per cent. One of the most important causes of non-gonorrheal salpingitis is the "terrible douche habit." By its too constant use the vagina is robbed of its natural protection against infection, and carelessness in asepsis often implants an infection. In a case, known by the authors, a gonorrheal infection was transmitted from a servant girl who had a virulent gonorrhea and had used the syringe of her mistress. Minor gynecological operations are responsible for many acute exacerbations of latent diseases of the tubes. Acute inflammations are not so rarely produced by a simple dilatation of the uterus, a prolonged intrauterine treatment, or a curettment. Post-puerperal infection is often the cause of the development of a salpingitis. In a large percentage of cases of appendicitis in the female, in the author's opinion, the right fallopian tube is infected. Tubercular salpingitis is occasionally met with. It was found but once in forty consecutive cases of salpingitis subjected to microscopical examination.

The wide-spread view that salpingitis and pyosalpinx are always due to a gonorrheal infection is dangerous and needs rectification from a sociological standpoint.

ORTHOPEDICS.

IN CHARGE OF

MALVERN B. CLOPTON, M. D.

Cases of Rupture of the Spinal Ligaments.—CHAS. F. PAINTER and ROBT. B. OSGOOD (*Trans. Orth. Association*, 1901).—Four cases are reported of injury to the spine in which there was kyphosis without tuberculosis or other disease of the vertebræ: in which there were symptoms of pressure on the cord, which pressure symptoms were relieved and the patients entirely recovered after treatment with plaster or leather jackets was commenced. Eighteen cases in all are tabulated, and the following conclusions are drawn:

1. Spinal ligaments during life may be ruptured without fracture or dislocation.

2. Nerve-pressure symptoms may occur from a simple flexion of the vertebral column.

3. Recovery in these cases requires prolonged rest in a position which favors the repair of ligaments, and that the effects of treatment speaks more for the ligamentous rupture than luxation or fracture.

4. The force which commonly produced the injuries (when stated) was one which, *a priori*, would be most likely to produce ligamentous rupture.

Caries of the Spine: An Analysis of One Thousand Cases.—J. HILTON WATERMAN and CHARLES H. JAEGER (*N. Y. Med. Journal*, November 9, 1901).—There were 535 males and 465 females. The dorsal region was most frequently diseased, the tenth dorsal vertebra in over ten per cent. of all cases. In over ten per cent. a tubercular family history was obtained. Abscesses were recorded in 158 cases, which is much less than in Vulpius' tabulation, where twenty-five per cent. had abscesses. Paraplegia appeared in forty-one cases, and fifty cases had tuberculous complications, a focus in some other joint or bone. There is a comparison throughout with the Vulpius statistics of 6586 cases.

Acute Anterior Poliomyelitis Among Adults on the Island of Guam.—ALF. G. GRUNWELL (*Report Surg.-Gen'l U. S. Navy*).—This epidemic raged over the island at the same time cerebro-spinal fever was epidemic throughout the world, but was regarded as distinctive because of the constancy and character of the

paralysis and atrophy (groups of muscles rather than whole limbs); the total absence of paralysis of any of the cranial nerves; the total absence of psychical symptoms; the absence of petechial or other skin eruptions; the infrequency of orthotonos and opisthotonos; and freedom from headache; the complete abolition of the reflexes. Everyone who contracted the illness but escaped death was left with some member of his body paralyzed, the paralysis usually coming on suddenly, but occasionally taking a week to develop. Atrophy invariably accompanied, but there was a tendency toward later improvement.

The Effect of Osteitis of the Knee on the Growth of the Limb.—HENRY L. TAYLOR (*N. Y. Med. Journal*, April 19, 1902).—It has recently been shown that retardation of the limb is an important cause of shortening after osteitis of the hip in children. When the tubercular process affects the knee-joint, the results are somewhat different. In processes involving long reparative activity near the piphysal lines, lengthening of the affected bone may result. Out of 116 cases Gibney and Berry found lengthening of the limb in sixty-two per cent.

The author measured the femora and tibiae, the feet and patellæ in forty cases, and grouped them according to the duration of symptoms: less than three years, between three and five years, and more than five years.

The results show that:

1. Gonitis in childhood usually causes lengthening of the limb when approximately straight, and this may persist for eight years or more.

2. This lengthening is mainly due to overgrowth of the femur, and may be often detected within six months of the onset. In adolescents and adults after cessation of active disease, begun in childhood, the femur and limb may be considerably shortened.

3. The tibiae are usually equal in length in the early stages; afterward the affected tibia may be slightly longer for a time, but is more often shorter, even in the first two years. This shortening increases in the older cases and after subsidence of inflammation.

4. With limbs of equal length and a duration of disease of several years the femur of the affected side will be found longer, the tibia shorter than its mate.

5. The feet and patellæ show a difference in favor of the sound side after a years' duration, and often before.

6. Stimulation of growth at the lower end of the affected femur, and more rarely and in less degree of at the upper end of the tibia, is usually accompanied by retarded growth in other parts of the limb; growth in the femur itself is finally retarded, and the final result, after many years, may be considerable shortening of the tibia, femur and limb.

Tubercular Spondylitis and the Compensation of the Kyphos.—J. FINCH-CHARKOW (*St. Petersburg Med. Wochenschr.*, 1902, vol. xix., No. 12).—The three factors usually considered as forming the boss are (1) the trauma, which may, but is not likely to, break the spongy body of the vertebra; (2) the reflected muscles, which are not considered a very important factor, inasmuch as in the dorsal region there is an almost entire absence of muscle along the bodies of the vertebræ; but here we see the greatest deformities. In the region of the psoas contracture is not found except with abscess formation, and in these cases the flexion on the thigh would be a necessary accompaniment, which is not always the case, even in bad lumbar deformities. After thus excluding these two points, the third and most important influence is the superimposed body weight. This makes the author consider all forms of treatment useless except rest in the reclining posture, with pads beneath the diseased vertebræ. Forceful correction is practiced in those cases with recent deformities. Plaster jackets are only used in these manipulated cases. Some cases are reported with no recurrence after one and a half to two years without wearing jackets, having been treated entirely by rest in bed.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Epistaxis in the Newly-Born.—D'ASTROS (*Archives de Medicine des Enfants*, April, 1902), in a review of this subject, concludes that this symptom always depends upon infection. Hereditary syphilis, either with or without local nasal lesion, is the most frequent cause. In some cases a septic infection underlies the condition. Not infrequently we have the association of syphilis and sepsis. When in the newly-born epistaxis appears to be idiopathic, careful examination for signs of latent syphilis should be made. The amount of hemorrhage is rarely large, still more rarely dangerous. Its gravity comes from its underlying cause, toward which the therapy should be directed.

Middle Ear Inflammations in Children and Their Relation to Deaf-Mutism.—KING (*Pediatrics*, April 1, 1902), calls attention to the great frequency of middle ear disease in childhood, and its dangers. The etiological factors would appear to be (in the order of their importance) adenoid vegetation and other diseases of the naso-pharynx, and the acute infectious diseases.

Of 46,532 ear cases collected from various hospitals, 149 terminated fatally, a mortality of 0.32 per cent.; and 40,073 autopsies in Vienna showed 232 deaths from otitic complications, a mortality of 0.58 per cent.

But, aside from the fatal terminations, ear disease has one dread sequela. According to King, in the large percentage of deaf people the majority can trace their infirmity to ear disease during childhood.

The severer forms of deafness gave rise to what is known as acquired deaf-mutism. It is estimated that one-half of all deaf-mutes come in this category. The child learns speech by imitating the speech of others, so that if the sense of hearing be destroyed, the child fails to develop speech power and remains dumb. If deafness supervene before the seventh year, deaf-mutism is almost certain to supervene.

The author insists upon the necessity for the careful treatment of ear disease in children, as a prophylactic against the development of a subsequent deaf-mutism.

Lobular Pneumonia in Infants.—SHEFFIELD (*The Post-Graduate*, April, 1902) claims excellent results in this condition from the following active course of treatment: Moderate doses of spts. etheris nitros. and liq. ammon. acet. are given at once. A poultice is then made up as follows: Five parts each of flax-seed meal and camphorated oil, one or two parts of mustard, and a sufficient quantity of boiling water to make a thick paste by thorough stirring. This mass is spread on thin gauze and applied snugly to chest and back. Child is then wrapped in an oil-skin covered cotton jacket and in a blanket. The poultices require renewal but three or four times in twenty-four hours.

In addition, expectorants, stimulants, nerve-sedatives and alteratives are resorted to as needed. Of the stimulants, strychnia is by far the best. Later on in the disease (about the sixth day) sodium iodid is given. If there are any signs of pleurisy the following ointment is applied: One part each of gaultheria oil, guaiacol and ichthyol, and four parts of iodine ointment. This ointment relieves pain and promotes absorption, and the author believes that by its use he has frequently succeeded in preventing pyothorax.

Cure of Prolapse of the Rectum in Children.—BAUMEL (*Arch. de Med. des Enf.*, April, 1902) concludes that cough, especially if it be persistent, and chronic diarrhea, are the most frequent causes of this condition, it being noted that the anatomical conformation of rectum and sacrum in the child favors such a condition.

In his experience surgical intervention, even in the severest cases, is not necessary. He reports that in cases where the knife, the thermo-cautery, and the local application of caustics (such as silver nitrate) had failed, he achieved excellent results by careful search for the cause, and by directing treatment as long as necessary to this, without any local treatment whatever.

Pyloric Stenosis in Infants.—SAUNDERS (*Archives of Pediatrics*, April, 1902) reports five cases of this rather rare anomaly.

The clinical phenomena are fairly uniform, and in the later stages, at least, the diagnosis is not difficult.

At a certain period after birth, propulsive, uncontrollable vomiting in larger quantity than can be accounted for by the previous feeding, occurs. Obstinate constipation ensues; the infant loses weight rapidly.

On inspection, the upper zone of the abdomen is seen to be bulging, the bulging subsiding after a paroxysm of vomiting. With thin abdominal walls peristaltic waves may be visible.

Gastric dilatation, with resulting catarrh, ensues. Stomach contents show evidences of decomposition, with presence of organic acids.

Post mortem: the pylorus is found much thickened and stenotic.

Of the author's cases, only one resulted fatally. The others were of a milder character, and the author calls attention to the intermittent character of the symptoms. He concludes that pyloric spasm is a factor of importance in the production of the emesis; indeed, Pfaundler holds that it is the principal cause of the symptoms. This spasm is sometimes due to a marked hyperacidity of the gastric juice, and it is noticeable that these cases improve when fed on whole milk, which neutralizes the excessive acidity. The author reports such a case. Whenever persistent vomiting occurs, therefore, the presence or absence of hyperchlorhydria must be established.

In cases without excessive acidity, the infants should be fed on whey mixtures or peptonized milk, in order to diminish the amount of curd in the food, which has to pass the narrowed pylorus.

In addition, drugs should be used to overcome the pyloric spasm, notably belladonna, bromides and chloral.

The secondary gastric irritation should be treated by washing out the stomach and giving it rest (rectal feeding).

If, in spite of these measures, there is no improvement, surgical intervention must be advised.

Rubella and the "Fourth Disease."—J. P. CROZER GRIFFITH (*Philadelphia Medical Journal*, April 12, 1902) concludes, from a study of the evidence adduced by various writers (especially Clement Dukes), as well as from his own experience, that there is no justification for the separation of the "fourth disease" from rubella.

He believes that we have two types of rubella, viz.: R. scarlatiniforme, R. morbilliforme, which do not confer immunity against measles or scarlet fever, but do protect against each other.

He sees "no possible reason for, and every reason against, the assumption of a 'fourth disease.'"

GENITO-URINARY SURGERY.

IN CHARGE OF

H. MCC. JOHNSON, M. D.

Pulmonary Embolism After Operations Upon the Bladder and Prostate.—KEYES, JR. (*N. Y. Med. Jour.*, April 5, 1902).—It is suggested by the author that pulmonary embolism after operations upon the bladder, and especially upon the prostate, is a more frequent cause of death than is generally supposed. He has collected ten cases from literature whose death appears to be due more or less to this complication. If these fatalities can really be attributed to pulmonary embolism, then it is the cause of sixty-six and two-thirds per cent. of the mortality in Dr. Keyes' practice since 1894, and of fifty per cent. of the mortality after Bottini's operation at the hands of Dr. Willy Meyer, a percentage which should attract grave consideration, more especially since it may happen in spite of rigid asepsis. To what is it due and how can it be prevented? The author has no answer, but trusts it may be suggestive.

Neglected Methods for the Sterilization of "Gum-Elastic" Catheters.—COTTON (*Boston Med. and Surg. Jour.*, March 27, 1902).—After numerous experiments, lasting over a period of six months, Cotton makes the following statement:

"As a result of these tests I am ready to claim that all the gum-elastic catheters, bougies, and filiform bougies ordinarily sold, may be boiled repeatedly and for long periods in saturated (or something less than saturated) solutions of ammoniac sulphate or sodic chlorid without essential damage. New instruments show no damage whatever, used instruments only a deterioration that is of no great consequence."

Movable Kidney, with Possible Explanation of Failure in Some Cases to Relieve Symptoms by Nephorrhaphy.—MALLET (*American Med.*, March 29, 1902).—From cases of movable kidney which have come under the observation of the author in which the nephorrhaphy has fixed the organ, but failed to relieve the symptoms, he is led to believe that the kidney has been fixed in a malposition, and that torsion or dragging upon its ureter, vessels and nerves may be produced in the fixation as well as by its previous mobility. When the means of suturing employed is that generally used in the customary operation of splitting the capsule along its convex border and dissecting it off on each side, this malposition consists in an outward rotation of the organ on its vertical axis; that is, the convex border is stitched too far backwards, thus causing the pelvis and its vessels to be tilted forward and obstructing the vessels and ureter.

Transplantation of the Ureters Into the Rectum for Exstrophy of the Bladder—By the Author's Extra-Peritoneal Method—Three Additional Cases.—PETERS (*Can. J. Med. and Surg.*, April, 1902).—The author's method of operating may be briefly stated as follows:

Having passed catheters into the ureters, their distal ends, together with a fair-sized rosette of the adjacent mucous membrane and muscle wall of the bladder, are dissected out and freed on both sides. The lateral walls of the rectum are now laid bare by blunt dissection. Pass a pair of forceps into the rectum and press the instrument against the lateral aspect of the bowel just above the internal sphincter. A slight cut over the end of the forceps allows it to pass through. After dilating this opening slightly so that it will receive the ureter with its catheter snugly, and yet without compression, the forceps is made to grasp lightly the end of the catheter and this is drawn through the rectal wound

and out of the anus. The forceps is then passed back beside the catheter through the same opening and made to grasp lightly the rosette of bladder tissue with the ureter, and this is now carefully conducted through the opening and made to protrude into the rectum, forming a veritable papilla. The same tactics are repeated on the other ureter. No sutures are used, but, instead, the wounds about the ureters are fairly firmly packed with iodoform gauze.

For treatment of the exstrophied bladder tissue, the mucous membrane is dissected away and the wound allowed to heal by granulation, or else a plastic operation is done, according to the extent of the exstrophy.

The author reports four cases—three of them recovering and remaining well and one dying five days after the operation from acute ascending infection.

He regards the papilla formed by the ureter projecting into the rectum as a real and efficient valve for preventing ascending infection, and believes that the rapidly fatal ascending infection in the one case of death could have been prevented had he made the implantation without using catheters in the ureters, as these held the ureters open and prevented the valve action. He advises discarding the catheters in future cases.

From the point of view of the comfort and happiness of the patients, the result in his successful cases leaves nothing to be desired. They are able to retain their urine almost as long, and apparently quite as comfortably, as in the normal bladder. In none of the cases is there any ascending infection, the observation in one case extending over more than two and a half years.

Cyclic Albuminuria.—HUGER (*Bul. Johns Hopkins Hosp.*, April, 1902).—The history of two cases observed by the author are given, and after considering the literature of the subject, the pathology, etiology and prognosis, he concludes, in part, that there are two classes: (*a*) Those few which develop a continuous albuminuria, and (*b*) the vast majority which get well. Continued rest in bed is advised. Huger believes that by a *very careful* examination for casts a large percentage of cases will be found to contain them, and that the serious prognosis given because of their presence will be modified.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

The Treatment of Acne Vulgaris.—LEREDDE (*Gazette des Hopitaux*, March 25, 1902).—Acne vulgaris is a microbic affection of the skin, that is to say, that the lesions by which it reveals itself are due to the proliferation of microbes in the mouth of the follicle, in the follicle or deeper down in the glands and tissue about the glands. This definition permits us to understand the role of local therapy. Disturbances of nutrition, intestinal, gastric, probably furnish a soil for the propagation of the organisms.

It is admitted to-day that acne vulgaris is developed as a complication of the seborrheic state, therefore the preventive treatment of the disease is that of seborrhea.

Acne vulgaris may be divided into acne puncture (acne punctata) and acne inflammatoire (inflammatory). The former is characterized by the presence of comedones and diffuse hyperkeratosis; the latter by nodules of various sizes, depths, with or without suppuration, and whose center is a pilo-sebaceous opening. The symptoms vary as to the quality of the skin of each patient, and are also influenced by secondary infection.

The author discussed in the usual manner the necessity of treating the general health and the correction of any gastro-intestinal disturbance; the hygienic conditions; the advantages of the daily hot bath as a stimulant, and the great care necessary in selecting a proper chemical agent to suit the case, remembering the quality of reaction in each case.

For the treatment of seborrhea he recommends several reducing agents, namely: sulphur, mercury, ichthyol. Besides these, keratolytics are used.

Sulphur is the foremost agent in the antiacne treatment (seborrhea), and should be used in pastes, as it is irritating in lotions and dangerous in pomades. Before using sulphur the grease of the skin should be removed to allow the deeper penetration of the sulphur; for this is recommended:

R	Sodii caustique.....	1.0
	Water	300 to 500.0
M.	Sig.—To be sponged over face.	

In acne punctata the keratolytics, resorcin and salicylic acid are used in the form of a paste, something after the following formula:

R	Vaseline	25.0
	Zinci ox	12.0
	Amyli	12.0
	Ac. salicylic.....	1 to 2.0
	Resorcin	0.50 to 1.0
M.	ft. pasta. Sig.—To be smeared on after soaping and washing the face.	

In inflammatory acne, the diffuse superficial form with crusts, suppuration and redness; soothing lotions and pastes of sulphur or ichthyol in the intervals are indicated.

The Study of the Cases of Accidental X-Ray Burns Hitherto Recorded.—E. A. CODMAN, M. D. (*Phil. Med. Jour.*, March 15, 1902).—After a thorough study and review of the literature upon this subject, Dr. Codman gives the following conclusions:

1. The frequency of X-ray injuries has been much exaggerated by the medical press owing to the wide publicity given to many early cases.

2. The writer has been able to collect somewhat less than two hundred cases, less than half of which were serious, and about one-third of which occurred in X-ray workers.

3. Judging from the experience with these injuries in Boston, it is the writer's opinion that a fair proportion of the severe burns are included in this series, while the dermatitis of skiagraphers is less well represented.

4. At a maximum estimate it is safe to say that not one patient in a thousand has been injured in the past five years by an X-ray examination, and in the past year not one in ten thousand.

5. More than two-thirds of these injuries occurred in the first two years of the use of the X-ray. Only one mild case is reported as occurring in the current year, those cases in which the exposure has been made for therapeutic purposes being excluded.

6. The cause of X-ray injuries is not definitely known. It is some form of energy closely allied to the photographically active X-ray and radiates with it from the platinum terminal.

7. The primary injury is to the nerves controlling the nutrition of the skin.

8. There is no good evidence of injury to the deeper tissues without primary interference with skin.

9. The important factors which contribute to the production of X-ray burns are: the intensity of the current used to stimulate the tube, the quality of the tube, the distance and time of exposure, the idiosyncrasy of the patient.

10. The static machine is somewhat less likely to produce injury than other forms of apparatus.

11. From the data of the reported cases we can say that no burn has been produced by an exposure equal to or less than the equivalent of five minutes at ten inches.

12. It is impossible from the data to say how intense an exposure must be to produce a burn, for a comparison of the cases shows that an inconstant factor or factors exist.

13. These inconstant factors are more likely to lie in the complex human organism than in the less complicated construction of the tube.

14. General experience has shown that soft tubes produce a more intense effect on the tissues than hard.

15. While we cannot control these inconstant factors, therapeutic exposures will continue to be dangerous, and it is therefore important to record the exact conditions of the patient's local and constitutional idiosyncrasies, as well as those of the tube.

16. In cases of injury the time before the appearance of the first symptoms has varied from a few minutes to three weeks. Five cases have remained latent for over three weeks; two of these for five months.

17. It is impossible to predict the severity of the lesion from the time of its appearance after exposure.

18. The writer suggests ten minutes at six inches from the platinum terminal, as a standard therapeutic exposure. This will make comparisons between the inconstant factors easier.

19. Unless signs of dermatitis appear within three weeks after the exposure, they are unlikely to appear at all. In one-third of the reported cases the appearance occurred within the first four days; in one-half the cases before the ninth day.

20. In the ordinary X-ray examination with fluoroscope or skiagraph, the operator takes the entire responsibility of injury; in exposures for therapeutic purposes the patient shares the responsibility.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

Catarrhal Otitis Media (Non-Suppurative) as a Factor in the Etiology of Facial Paralysis.—REIK (*Johns Hopkins Hospital Bulletin*, April, 1902) calls attention to what he believes to be a neglected factor in facial paralysis—a factor which is of importance, not only as a means of explaining the etiology and pathology of a large class of cases, but of prime importance in determining the best form of treatment. The author is convinced that in the majority, if not in all cases of facial paralysis of the "refrigeratory or rheumatic class, an acute or subacute otitis media is an intermediary condition between the exposure to cold and the appearance of the paresis. The action of cold in the production of facial paralysis is easily explained when we consider the anatomical relations of this nerve and the frequency of cases in which the nerve, in its passage through the middle ear, is covered only by the mucous membrane of the middle ear cavity; also the great frequency of acute or subacute otitis media following exposure to cold. The usual history of a facial paralysis occurring without any other apparent lesion in an otherwise normal individual is that the patient, having contracted a cold, finds himself four or five days later (often earlier) with a drawn mouth, and soon more or less complete inaction of the facial muscles of one side. He

may not have had prodromic symptoms, but, if he has, these generally consist of a pricking or stinging pain in the ear, with a sense of fullness, slight deafness and tinnitus, following the ordinary symptoms of a cold in the head or sore throat. The ear symptoms are apt to be mild, and sometimes attract little or no attention. The author has observed four cases of facial paralysis in which rapid recovery took place after proper treatment had been directed toward the ear. A brief history of one of the cases is given, viz.:

The patient was first seen on August 29th. Four days previously he had noticed signs of a right facial paralysis; he had had a slight cold in the head, accompanied by some pain, though not severe, in the right ear. There was no earache, but pressure over the mastoid elicited some tenderness. The tympanic membrane was not congested, but there were indications of fluid in the middle ear. A paracentesis was performed, and some serous fluid escaped. A sterile cotton wick was inserted, and this was found to be saturated with serum on the following morning. The mastoid tenderness had disappeared. No organisms were found. On the 29th the paralysis was complete. August 31st he was able to close the upper eyelid, and by September 9th he had regained almost complete control of the facial muscles. The discharge ceased within a few days, and the perforation was almost healed when he left the hospital.

There can be little doubt that this was a case of mild pharyngitis, followed by a subacute otitis media, involving the antrum and other cells in the mastoid as well, which produced paralysis through the effect of the exudate upon the facial nerve in its course through the tympanum. The points which the author wishes particularly to bring out are: *First*.—If exposure to cold, in one way or another, is the cause of most cases of facial paralysis, it probably acts most commonly through the production of an otitis media, whereby the nerve becomes involved either in a direct extension of the inflammatory process to its exposed sheath, or through pressure upon it of an exudate. *Second*.—This being admitted, the form of treatment which offers the most rapid and satisfactory results is a paracentesis of the tympanic membrane to free the cavity of its abnormal contents. *Third*.—We should never, in any case of facial paralysis, neglect to examine the ear.

A Fatal Case of Acute Primary Infectious Pharyngitis with Extreme Leukopenia.—BROWN (*American Medicine*, April 19, 1902) reports a fatal case of acute pharyngitis in a woman aged twenty-nine years. The history and post-mortem findings are given in detail. The patient died, seven days after the onset of the trouble, from edema of the glottis. Blood examinations were made daily. The first count showed 340,000 red corpuscles and 1,000 white per cm., while on the seventh day the number of white cells had fallen as low as 260 cm. At the autopsy no collection of pus could be found, but there was marked decubitus on the posterior surface of the epiglottis and the edema completely closed the glottis. The lymphatic glands were enlarged and the mucous membrane of the posterior wall of the pharynx was greatly inflamed. Cultures made from blood clot on the heart, bone marrow, epiglottis, vocal cord and left kidney showed the staphylococcus pyogenes. The author states that infectious pharyngitis was first described by Senator in 1888, who reported four cases. Since that time the number of reported cases has been small, and the subject has not received the attention that it should.

An Exenteration of the Tympanic Cavity for Acoustic Purposes.—GRADENIGO (*Archiv fuer Ohrenheilkunde*, 55 Band, Heft 1 und 2).—The author, after having removed the tympanic membrane and ossicles in a series of cases of middle ear disease, has reached the following conclusions:

First.—That the results of surgical operations in the middle ear cavity depend on the integrity of the labyrinth.

Second.—The best results are obtained in those cases following a suppurative middle ear trouble, where there is a partial destruction of the drum and the ossicles. Good results are also obtained in a class of cases which are not well understood, but are known from the history alone to follow suppurations of the middle ear cavity, as they do not show any characteristic changes in the drum.

Third.—In the dry form of chronic middle ear inflammation, the results are less satisfactory, but much better results are obtained in the sclerotic cases. This argues against the fact that the labyrinth is more involved in the sclerotic than in the catarrhal cases. The explanation of this is, that no regeneration of a membrane takes place which interferes with the sound waves reaching the labyrinth, as is the case in the chronic catarrhal conditions.

Fourth.—The post-operative treatment has a very important influence as to the definite outcome.

Fifth.—If the deafness has principally the character of a labyrinth affection, operative interference is contraindicated, because the consecutive reaction aggravates the process in the labyrinth.

Sixth.—That the experiences in intratympanic surgery show that our knowledge of the physiology and pathology of the organ of hearing is still very deficient and uncertain.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

A Method for Performing Iridectomy in Aphakial Eyes with Complete Obliteration of the Anterior Chamber.—DESCHAMPS (*Ann. d'Oculistique*, February, 1902).—Deschamps describes a method for performing iridectomy which he has devised to meet the conditions obtaining in aphakial eyes with obliteration of the anterior chamber. In such cases where the iris lies directly against Descemet's membrane the operation according to the ordinary method or even the modification of Gayet, is extremely difficult or impossible. Deschamps' operation is thus described: A cataract knife is introduced at the limbus corneæ, passed into the vitreous *behind* the prolapsed iris and made to emerge at a symmetrical point 4 mm–5 mm. away. The intervening tissues are then cut through. Iridectomy forceps are introduced, the iris seized from behind and separated from the cornea. This procedure is facilitated by gently rubbing the posterior surface of the agglutinated iris. Finally the iris is drawn out through the incision and clipped off.

This method was eminently successful in the two cases reported.

Diabetes and the Eye.—S. B. ALLEN (*N. Y. Med. Jour.*, March 29, 1902).—Nuclear ocular palsy—*i. e.*, ophthalmoplegia externa or interna—may occur as an early expression of diabetic intoxication and is thus important from a diagnostic point of view. The third nerve is the one most frequently affected; more rarely the sixth, the fourth and the facial. When occurring early in the disease these paralyses are apt to be partial, and many clear up. Late paralyses, however, usually persist. Paresis of accommodation in persons under the presbyopic age, and changes in refraction due to alteration in the shape of the globe and lenticular change, should lead to the suspicion of glycosuria. Diabetes is the only toxic condition which causes cataract *per se*. Cataract of diabetic origin is not distinguishable from ordinary senile cataract, but lenticular opacity occurring in young persons and developing rapidly should at once suggest glycosuria.

Diabetic retinitis closely resembles the retinitis of albuminuria, and ophthal-

moscopically the two forms are hardly to be distinguished. Diabetic amblyopia is due to an optic neuritis and presages the onset of coma. A retrobulbar neuritis similar to the picture of a tobacco intoxication, with the presence of central scotoma, occasionally obtains.

The iritis of diabetes is usually plastic; less frequently there is a formation of a moderate hypopyon, which is either resorbed or becomes organized in the pupillary area, thus giving rise in some cases to secondary glaucoma. Ulceration of the cornea in diabetes is a serious complication, and may result in the loss of the eye.

Syphilitic Ulcer of the Eyelid.—W. C. POSEY (*Ophthalm. Record*, March, 1902).—Female, fifty-two years, presented herself with the tissues of the lower lid margin completely destroyed in consequence of an ulcerative process which extended from the junction of the outer and middle third to within 4 mm. of the outer angle. The trouble began at the lower outer margin of the lid as a small lump resembling a hordeolum which eventually inflamed and a small ulcer appeared at the inner part of the lid. The patient had been suffering for five months with a running sore on the head. In view of the necrosis of the skull the case was regarded as of syphilitic origin, and the ocular complication was finally controlled by large doses of mercury and potassium iodide. Worthy of note is the resemblance of the condition in the beginning to an ordinary sty.

A Separate Gumma of the Caruncle and Ocular Conjunctiva.—G. F. SUKER (*Am. Jour. of Ophthalm.*, March, 1902).—The conjunctiva and caruncle are less frequently the seat of ocular gummata than the other tissues of the eye. The literature contains but thirty-five cases of gumma of the conjunctiva, and one case only of gumma of the caruncle. The tumors are small, varying in size from a pea to a bean, and most frequently appear in the bulbar conjunctiva near the upper and lower fornices. A variety of conjunctival gumma is the so-called syphilitic blotch, which occurs as a small circumscribed, slightly elevated area of moderate vascularity. The lesions may occur as early as eighteen months and as late as twenty years after the primary affection, the average being from three to five years. Superficial ulceration is frequent. Many gummata begin near the upper fornix and extend downward accompanied by considerable chemosis. Swelling of the preauricular and submaxillary glands is constant and constitutes the most valuable diagnostic point. The diagnosis is based further on a positive specific history and the success of the therapeutic test.

The case reported is believed to be unique in that there occurred a gumma of the caruncle and a separate gumma of the conjunctiva in the same eye. Under mercurial inunctions and potassium iodide a complete cure was promptly effected.

Visual Tests for Children.—A. E. EWING (*The Am. Jour. of Ophthalm.*, February, 1902).—Although estimation of the refraction in children and illiterates may be approximately realized by objective methods, the acceptability of any given glass for distance can only properly be determined by direct visual tests. In 1885 Ewing designed a series of familiar objects, such as a horse-shoe, a circle, a rocking-chair, a chair, a cross, a teapot, a square, etc., and has recently supplemented the list by the addition of a teapot, a mug and a heart. The objects are drawn to Snellen's scale of 1' visual angle for the thickness of the line, and 5' for the size of the object, the gradation in size conforming to a series in geometrical progression in the ratio 1:0.7 as compared with the next larger size, or of 1:1.4 as compared with the next smaller size.

BOOK REVIEWS.

THE PRACTICE OF OBSTETRICS BY AMERICAN AUTHORS. Edited by CHARLES JEWETT, M. D., Professor of Obstetrics and Gynecology in the Long Island College Hospital, New York. Second Edition, revised and enlarged. Illustrated with 445 Engravings, 48 of which are in Colors; 36 Colored Plates. Lea Brothers & Co., New York and Philadelphia.

Among the many text-books of obstetrics this book keeps a leading position. The best proof of its popularity is shown by the fact that the first edition was exhausted within two years. Assisted by nineteen collaborators who represent some of our best schools, Jewett gives in this excellent book the best teachings of obstetrics, referring in this second edition to the latest achievements in this branch. The magnitude of the work precludes a detailed synopsis of its contents, and we must limit ourselves to the statement that this work comprises the whole subject in a most complete and satisfactory way. Numerous illustrations, the majority of which are real works of art, enhance greatly the value of the book. The more careful reader, however, is at some places too distinctly impressed by the fact that each chapter is written by a different authority. There are some contradictions. The hypertrophy of the heart during pregnancy stated in one place as a physiological process, is denied in another chapter. There are a great number of repetitions, which, of course, cannot be entirely avoided. While in one chapter pregnancy is counted in calendar months the same is done in another chapter in lunar months. There are some chapters which excel by their brilliancy—*e. g.*, those dealing with the development of the ovum, the anomalies of the pelvis and the puerperal infection. The last one mentioned gives a very complete list of literature, a feature which adopted in the same way by the other collaborators certainly would greatly increase the value of the work as a source of information for the scientific investigator. We will conclude this short review by expressing our sincere belief that Jewett's Practice of Obstetrics in its new enlarged edition will meet the success which it fully deserves.

UEBER DIE AETIOLOGIE DES CARCINOMS MIT BESONDERER BERUECKSICHTIGUNG DER CARCINOME DES SCROTUMS, DER GALLENBLASE UND DES MAGENS. Von DR. GUSTAV FUETTERER. Verlag: J. F. Bergmann, Wiesbaden. G. E. Stechert, New York, agent. 1901. Price, 4 marks.

With the evidence at hand the author of this monograph is not willing to accept the parasitic theory of cancer. He considers the etiology of cancer from every standpoint, and presents interesting cases in support of his views. The work is dedicated to Virchow in honor of his eightieth birthday. The work containing the close observations of a careful observer, is a valuable contribution to the much debated question—the etiology of carcinoma.

DER GEHALT DES MENSCHLICHEN URINS AN STICKSTOFFHALTIGEN KOERPERN. DIE BESTIMMUNG DES OSMOTISCHEN DRUCKS UND DES DISSOCIATIONGRADES. Fuer Aerzte und Studirende. Dargestellt von Medizinalrath Dr. med. CAMERER. Price, 2 marks Franz Pietzcker, Tuebingen, 1901. G. E. Stechert, New York, agent.

In this little pocket manual of 52 pages the author has included all of the most salient points in the determination of the nitrogenous substances in the urine. He has endeavored to present in an assimilable form his work along this

line for the past decade. The first part deals with the consideration of the nitrogenous substances of the human urine in normal and in various pathological conditions; second, with the determinations of osmotic pressure and the degrees of dissociation.

GRUNDRISS DER INNEREN MEDICIN. Von C. LIEBERMEISTER. Zweite vermehrte Auflage. Franz Pietzcker, Tuebingen, 1901. G. E. Stechert, New York, agent.

Liebermeister's exhaustive work on Special Pathology and Therapeutics in five volumes is well known to all students of medicine. In *this* small volume the author endeavored to and has succeeded in selecting those points which are of the greatest practical interest to the physician. It is truly remarkable how much has been condensed into these 450 pages. There are no charts or illustrations in the work. It is devoted entirely to the definite and concise statement of facts. One feels entirely satisfied after reading a chapter, be it ever so short, that he has gained all of the most salient and practical points concerning the subject in hand. In this edition there have been added chapters on syphilis, the venereal diseases in general, and the most important poisons.

MOSQUITO BRIGADES, AND HOW TO ORGANIZE THEM. By RONALD ROSS, F. R. C. S., D. P. H., F. R. S., Walter Myers Lecturer in Tropical Medicine, Liverpool School of Tropical Medicine; Major Indian Medical Service, Retired. New York: Longmans, Green & Co. London: George Philip & Son. 1902.

This little book deals with the proposition of the extinction of the mosquito, and thereby the prevention of the spread of the mosquito-borne diseases, malaria, yellow fever and elephantiasis. The author is too well known by his excellent work on the mosquito question to need further introduction at the reviewer's hands. He takes up the question of the practical extinction of the mosquito, the culex and the anopheles. He narrates the method of organizing working brigades of men to destroy the native habitations of the culex and anopheles larvæ. The book is a valuable one and should be read by every medical man. Its teachings should be followed by those in charge of our sanitary departments.

Ross demonstrates how easy it is to destroy the mosquito, and he deprecates the apparent apathy with which the British government has received the scientific facts concerning the role of the mosquito in the spread of yellow fever and malaria. He pays tributes most complimentary to the work of the American mosquito brigades in Havana. The book concludes with abstracts of the principal articles written on this subject.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY. Under the general editorial charge of GEO. M. GOULD, M. D. 2 volumes. Medicine, pp. 715; Surgery, pp. 684. W. B. Saunders & Company. 1902.

These excellent volumes, which contain a resume of the progress in medical and surgical science during the year 1901, maintain the high standard of former issues of the publication. Valuable features are the editorial comments by specialists in the different branches of medicine and surgery, numerous well-drawn illustrations, and an excellently arranged index.

MEDICAL BULLETIN OF WASHINGTON UNIVERSITY. Vol. I., No. 1.

This Bulletin will be issued quarterly by the Medical Faculty of Washington University. It is published for the benefit of the alumni of the school, and will contain original communications, clinical reports, department notes and items of personal interest to the graduates.

LEHRBUCH DER TOPOGRAPHISCHEN ANATOMIE, ZUM GEBRAUCH FUER AERZTE UND STUDIERENDE. Von Dr. FR. HERMANN, a. o. Professor der Anatomie an der Universitaet Erlangen. 1. Band: Kopf und Hals, Erste Abtheilung: Kopf Mit 183 Figuren, vorwiegend nach Originalzeichnungen des Verfassers. Leipzig: Verlag von S. Hirzel. 1901. Price, \$4.50. G. E. Stechers, New York, agent.

If the rest of the work, when complete, is of the same high standard as that maintained by the first portion, which lies before us for review, then anatomical literature of German origin will be distinctly richer thereby. The 418 pages are cleanly printed upon fine grained, heavy paper. In fact, the whole is a worthy representative of the modern German publisher's art. Too much cannot be said in praise of the illustration, though it may be remarked that quality rather than quantity seems to have been the author's aim, since there are fewer cuts than one or two recent books on similar subjects contain. Most of the illustrations are original, the proper author being given credit, however, where a copy is made. Hermann explains in his preface that his cuts have been made from photographs that had served as a sort of groundwork for pen-sketches. The idea seems a most commendable one, since in the photograph there is retained all the exactness of proportion, and in the drawing is added the fineness of detail which must necessarily have been lost in trusting to the camera alone. When a cut is intended as schematic, the author always indicates the fact. Whereas, all other illustrations may be regarded, as far as realism is concerned, as works of true art. Too many text-books palm off on the student purely schematic drawings for finished representations of the various parts and organs. The seventeen chapters presented are assigned to the skull, brain, eye, nose, mouth, face, throat and ear, each being subdivided in the way which would most naturally suggest itself.

In many instances the work oversteps the confines of a normal anatomy, and gives us insight into the field of pathological anatomy, thus having the wider surgical application. In discussing the development of the lip, the author does not confine himself to the expected, but illustrates the error which results in the formation of hare-lip. Again, in discussing the base of the skull, we are not restricted to the normal alone, but have given the classic fracture lines through the base. The neurologist, too, finds something beside the ordinary facts which he might await, for in dealing with the anatomy of the pons, Hermann also shows in cuts the site of the lesion in pontine paralysis. The surgeon is aided by having indicated upon the exterior of the skull the lines which lie over the various fissures, so has an aid to localization.

Just how recent the work really is, is indicated by the fact that the author's preface is signed July, 1901; so we get the material just from the press.

Last, but not least, one feature which recommends the book is that it is lavishly supplied with marginal titles—certainly a great aid to one who desires to look up a point without having to read far.

A MANUAL OF DISEASES OF THE NOSE AND THROAT. By CORNELIUS G. COAKLEY, M. D., Professor of Laryngology in the University and Bellevue Hospital Medical College, New York. New (2nd) edition. In one handsome volume of 556 pages, with 103 engravings and four colored plates. Cloth, \$2.75, net. Lea Brothers & Co., Philadelphia and New York. 1901.

The fact that only two years elapsed since the first edition of this manual appeared shows how popular it has been. In revising, the author has added a new chapter on the affections of the upper respiratory tract in the infectious diseases, together with several colored plates and additional illustrations. It is in every way an up-to-date manual and fully meets the requirements of the student and practitioner.

DIE CHIRURGIE IN DER LANDPRAXIS. Kurzgefasstes Nachschlagebuch fuer Praktische Aerzte, von PROF. DR. CARL BAYER. Mit 41 Abbildungen im Text. Dritte vermehrte und verbesserte Auflage. Berlin W. 35. Fischer's Medizin. Buchhandlung, H. Kornfeld. Price, \$1.20. 1901. G. E. Stechert, New York, agent.

This small work is intended, as the name implies, for a ready guide to the man who is not a surgeon in the strictest sense of the word, and more than this, for one who has not the time for the study in detail of larger surgical works. The 246 pages and 41 cuts are devoted to the diagnosis and treatment of all the surgical affections which are likely to confront the practitioner at a distance from hospitals and well-equipped surgeons. In other words, the book is intended to help the man who must help himself, and so does not take those conditions which can be treated at leisure and thus readily await the specialist's pleasure.

After the chapters on asepsis and the other general considerations which are indispensable, come a number which take up, each of them, special subjects, such as hemostasis, tracheotomy, etc., clear down the list to the extraction of foreign bodies from the various body cavities and orifices.

The author's introduction is worth the price of this small book: it consists of a neat little outline of what is expected of the modern surgeon, drawing at the same time a comparative picture of the little that was required of the doctor who antedated anesthetics and antiseptics.

STUDIES IN THE PSYCHOLOGY OF SEX. SEXUAL INVERSION. By HAVELOCK ELLIS. F. A. Davis Co., Philadelphia, Publishers. Extra Cloth, \$2.00. Sold only to Physicians, Lawyers, Advanced Teachers and Scientists.

The peculiarities of sexual life will never cease to interest humanity. This fact is always the pretext for certain publishers to bring, under the pretense of "science," books on the market which have nothing to do with real science and are solely intended to appeal to the morbid longings of laity. No wonder that a physician who is called upon to pass judgment on a book of this character will approach his task with distrust. The greater is his satisfaction when he comes to the conclusion that in this exceptional case his distrust was not justified. This holds true in the book of Havelock Ellis.

The author is well known as a prominent psychologist, and approaches in this capacity the often disputed and never solved question of sexual inversion. He has had a great personal experience in the matter, and is founding his conclusions upon ascertained definite facts. In his opinion, sexual inversion is based upon congenital conditions, upon a certain predisposition. In many individuals this predisposition to inversion may remain latent; in others the instinct is so strong that it forces its own way in spite of all obstacles; in others, again, the predisposition is weaker, and a powerful exciting cause plays the predominant part. In his opinion the school is the great breeding-place of artificial homosexuality. Adoption of the method of co-education of both sexes would be the best preventative. This volume is one of a series of probably five in which the author intends to treat the subject of psychology in sex in its entirety. To those who are seeking information in this striking problem this work may heartily be recommended.

MANUAL OF CHILDBED NURSING, WITH NOTES ON INFANT FEEDING. By CHARLES JEWETT, A. M., M. D., Sc. D., Professor of Obstetrics and Diseases of Women in the Long Island College Hospital. Fifth Edition, Revised and Enlarged. New York: E. B. Treat and Co., 1902.

This manual, originally written for the use of nurses only, is in its present new form adapted to general use. By making all statements in form of con-

denser paragraphs the author was able to deal with the subject of childbed nursing in a very detailed and explicit way within the limit of 80 pages. The value of this little book is vouched by the name of the authors.

PROGRESSIVE MEDICINE, Vol. I., 1902. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 452 pages, 5 illustrations. Per volume \$2.50, by express prepaid to any address. Per annum, in four cloth-bound volumes, \$10.00. Lea Brothers & Co., Philadelphia and New York.

In volume I for 1902 of *Progressive Medicine* the surgery of the head, neck and chest is considered by C. H. Frazier. The review of the literature on the surgery of the Gasserian ganglion and of the heart deserves special mention. The section on infectious diseases is written by F. A. Packard. Floyd M. Crandall deals with the diseases of children. The section on pathology by Ludwig Hektoen is a summary of the work being done in this science, which underlies every department of medicine and yet with which it is impossible for the clinician to familiarize himself unless studied through some such medium as the present volume. Laryngology and rhinology are written by St. Clair Thomson. R. L. Randolph's section on otology concludes the volume.

These quarterly volumes contain contributions which cover every field of medicine and surgery. They are written by experts who know exactly what is of the greatest value to the practitioner, and these facts easily explain the remarkable success of this publication.

A PRACTICAL GUIDE TO THE ADMINISTRATION OF ANESTHETICS. By R. J. PROBYN-WILLIAMS, M. D., Senior Anesthetist and Instructor in Anesthetics at the London Hospital; Lecturer on Anesthetics at the London Hospital Medical College, etc., etc. London, New York and Bombay: Longmans, Green & Co. 1901.

Of late, in American medical journals, the question of the necessity of special instruction of the medical student in anesthetics has been often and extensively dealt with. While in some colleges the importance of this branch of instruction is properly acknowledged, it is beyond doubt that in general a certain negligence is still prevalent. Here we have a little book that affords to every physician who is called upon to administer anesthetics, and whose instruction has been somewhat deficient in this field, the opportunity of enriching his knowledge.

It is a well-known fact that in no other country on the globe more care and diligence is devoted to the art of narcosis than in England, and this book, written by the "senior anesthetist and instructor of anesthetics at the London Hospital," gives ample proof for this statement. In 200 pages the author supplies the essentials of all the various kinds of narcosis, dwelling upon the characteristics of the various drugs, their indication and fitness for certain conditions, their administration, etc. A special chapter is devoted to local anesthesia. We gladly state that this book is the best on this subject of which we have knowledge.

PEDIATRICS—THE HYGIENE AND MEDICAL TREATMENT OF CHILDREN. By THOMAS MORGAN ROTCH. 3d Edition. J. B. Lippincott & Co., Philadelphia. 1901.

The third edition of Rotch's well-known work in pediatrics has been largely rearranged and almost entirely rewritten. The fact that a medical text-book can run into three editions in six years is, of itself, proof of its worth. As in the other editions, a considerable part of the work is given up to a consideration of the phy-

siology of infancy and childhood, forming a valuable compendium of present knowledge on the subject. With reference to the question of substitute infant feeding, the author is still apparently firmly convinced of the value of laboratory modification of milk. It is, therefore, not surprising that this method of feeding (which owes its inception very largely to Dr. Rotch) should again be given a full exposition. Into the merits of this question it is not necessary to go, suffice it to say that the author's position, though clearly, is nevertheless fairly stated. A distinctive, also a very valuable, feature of the book is its personal, or rather its individual tone. As an exposition of pediatric knowledge of the day, the work in its entirety must certainly be considered as standing in the first rank. The book work itself is fully up to the standard of the publishers, though one cannot help wishing that the colored plates had approximated the natural a little more closely.

SYPHILIS. A SYMPOSIUM. Contributions by Seventeen Distinguished Authorities. 122 pages. Price, \$1.00. E. B. Treat & Co., New York. 1902.

The unanimity of opinion about well-established facts of syphilis, as well as the diversity of conclusions about those less capable of demonstration, are forcibly brought to one's mind upon reading this symposium. It is interesting and instructive, and to the thinker an hour with these authors is refreshing. The chapter on the "Curability of Syphilis" is especially striking from the forcible manner in which facts and fancies are handled.

THE MEDICAL NEWS POCKET FORMULARY FOR 1902. By E. QUIN THORNTON, M. D. Fourth Edition, Revised. Price, \$1.50. Lea Brothers & Co., Philadelphia and New York. 1902.

This little pocket edition is a splendid aid to young physicians who have not yet become sufficiently acquainted with the physiological action, doses and compatibility of drugs to enable them to be guided entirely by the exigencies of the case in hand. For all it is an excellent reference book for popular, palatable and standard formulæ. It contains some 1,700 prescriptions representing the latest and most approved methods of administering remedial agents.

BEITRÄGE ZUR BAUCHCHIRURGIE UNTER BESONDERER BERUECKSICHTIGUNG DER IM LETZTEN JAHRE AUSGEFÜHRTEN 84 GALLENSTEINLAPAROTOMIEN. Von PROF. DR. HANS KEHR, OBERARZT DR. BERGER und DR. WELP. Berlin. 1901. Fischer's medicin. Buchhandlung, H. Kornfeld. Price, \$0.90. G. E. Stechert, New York, agent.

The world-wide reputation of Hans Kehr in this line of work is a sufficient guarantee for the quality of this booklet. Probably no other surgeon ever did so much gall-stone surgery as he, hence one cannot fail to profit by what he writes, since he is acknowledged to be the undisputed master of this field, just as Kocher is in the treatment of goitre, Bergmann of brain lesions, or Mikulicz of the surgical affections of the gastro-intestinal tract.

This is in reality a clinical report of the private work done by Prof. Kehr between September 15, 1899, and September 15, 1900, on biliary passages, stomach, intestine and pancreas. There are in addition general chapters on diagnosis, prognosis, treatment, etc. Hence the work is of interest not only to the surgeon and specialist, but to the practitioner as well, on account of the diagnostic work which he is called upon to do.

Cases of no especial interest have, for the sake of brevity, been left out of the report; but everything novel or original has been given in full. The feature of the book which will prove most generally useful is the table in which are con-

sidered the twelve principal affections of the biliary passages; since after each in parallel columns are given in full the symptoms, diagnosis, and proper treatment of each. Kehr wrote the chapter on surgery of the liver, etc., in the "Practische Chirurgie" of v. Bergmann, v. Bruns and v. Mikulicz, and in it made a decided hit by presenting this very table. However, not many physicians are in possession of that large and expensive work, hence it seems commendable that this table has been reproduced in this inexpensive form.

THE JOURNAL OF MEDICAL RESEARCH, April, 1902. This number is the Second Annual Report of the Cancer Committee to the Surgical Department of the Harvard Medical School. Its publication is paid for in large part by the funds of that committee.

This issue contains some very interesting articles which bear on the subject of the so-called parasites of cancer. These articles are abstracted in another place in the present issue (Department of Pathology and Bacteriology).

The volume, like its predecessors, is an impressive and imposing one and reflects credit on American research work.

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ORIGINAL ARTICLES.

BIOLOGY AND PATHOLOGY OF PREGNANCY.

By DR. JULIUS NEUMANN, of Vienna, Austria,

DOCENT OF OBSTETRICS AND GYNECOLOGY, IMPERIAL UNIVERSITY OF VIENNA.

Scientific investigations during the past decade have almost revolutionized our views as regards pregnancy in general, its influence upon the life of women, and its importance as an etiologic factor in the manifold diseases peculiar to womankind. Much fruitful work has been done in the study of the normal and pathological histology of the developing ovum. To give here a full account of the whole advancement would transgress the scope of this journal, and I will, therefore, confine myself to a brief survey. I will try to give a short sketch of the views on pregnancy as held by the modern biologist and pathologist.

In the very moment when the spermatozoon penetrates the egg, viz., when impregnation takes place, a minute body, the impregnated ovum, begins to manifest an activity the effects of which immediately become noticeable. The process of cleavage begins in the nucleus, and soon extends throughout the vitelline mass. The fructified ovum enters the uterus and lodges in the uterine mucosa. All the structures of the uterus begin to undergo important alterations, the most noticeable being the transformation of the mucosa into decidua. Other symptoms of the fact that impregnation has occurred appear. Menstruation ceases; probably the ovaries do not discharge any more ova and discontinue their other function, important for the economy of the whole body, known as internal secretion. These facts have a far-reaching practical importance, as I will show later. The importance of the site and of the mode of the imbedding of the impregnated egg are nowadays generally acknowledged, while, however, the significance of the cessation of internal secretion during pregnancy as an etiological factor in the pathology of pregnancy, is still largely based on hypotheses. Distinct changes in the general condition of the impregnated woman become manifest. Most of them are incident to pregnancy—that is, are physiological sequelæ of the normal process of fecundation. From a teleological standpoint, therefore, we ought to consider them normal; but as physicians we are bound to call them pathological, and must try to avoid respectively to alleviate them. These symptoms may be divided into those psychic and those somatic. There is noticeable in the majority of cases a change in the disposition of the woman. Some become bright and merry, others sad and despondent, or quarrelsome and morose, or irritable and nervous. That this psychological change is not always due to external circumstances (*e. g.*, to the knowledge of the woman that she is to

expect offspring, which is as well a cause for hilarity as for sorrow or repentance) is proved by cases in which the change in disposition is the first symptom of impregnation, observed before cessation of menstruation. More common are the somatic alterations during pregnancy. Sickly, poorly nourished or anemic individuals not so rarely begin to gain in flesh and flourish; healthy women, however, begin sometimes to fall away and feel miserable and weak. Often this change is due to the alteration of the stomach, almost characteristic of pregnancy. Continuous nausea or excessive vomiting are liable to considerably impair the economy of the body. Of other symptoms often observed during pregnancy I may shortly mention headache, salivation, hyperhydrosis, obstipation, etc. While we do not yet know the real cause for these psychic and somatic disturbances during pregnancy, for the physiologic alterations taking place locally (in uterus and its appendages) or in remote places (changes in the mammary glands), recent investigations trend to prove that they are produced by a change in the metabolism of the body. The question of autointoxication during pregnancy holds, at present, a predominant position in the studies of modern scientists.

Well in accord with this hypothesis, for instance, is the fact that during pregnancy the irritability of the nervous system is usually increased. In a series of observations I found that in pregnant women, as a rule, especially during labor, the patellar reflex is markedly increased. (*Centralbl. fuer Gyn.*, 1895, p. 201.) I observed that in pregnant women the resistency of the skin against electrical currents is considerably lessened. From extensive examinations I came to the conclusion that the decrease in the pulse-rate during the lying-in, known as *bradycardia puerperalis*, is caused by an irritation of the *nervus vagus* (*N. pneumogastricus*). Since, according to my observation, this slowing down already begins during labor, I am justified to make mention of this condition here, while speaking of the biology of pregnancy. (*Monatschr. fuer Geb. und Gyn.*, Vol. ii, p. 278.) I will but refer to the symptom of dermatography observed in pregnant women. H. W. Freund reported that he found in a great number of cases this condition in which tracings made on the skin leave a distinct reddish mark.

These changes and disturbances while common, and forming ample proof of the revolution taking place in the whole organism of the pregnant woman, are not found in every instance. Not so very rarely the impregnated ovum has far progressed in its development before some minor symptom, as increase of the size of the abdomen, arouses the attention of the woman.

Undoubtedly suggestion plays a certain part in the symptomatology of pregnancy. There are cases of pseudocyesis, of imaginary pregnancy, on record in which the patients exhibited all the typical disturbances of pregnancy without being pregnant.

In the second half of pregnancy two other factors are added which may give rise to disturbances. The motions of the fetus, which under normal conditions are but an uncomfortable feeling for the pregnant woman, may be painful, especially so if there is lack of amniotic fluid. Another train of symptoms is produced by the size of the uterus, by its pressing against the abdominal wall, the diaphragm and the various abdominal organs.

During pregnancy the amount of the muscular tissue in the uterine wall is immensely increased, the broad ligaments unfolded, all the suspensory ligaments

of the uterus lengthened, the peritoneum exceedingly stretched, and the adnexa are lifted out of their normal position from the depth of the pelvis into the abdomen. These changes are normal, physiological and without parallel in all the other organs during their functional life.

The external genital organs are involved in the changes due to pregnancy in a very early stage. A bluish discoloration of the vulva is one of the first symptoms of impregnation. The hyperemia brings about a more copious mucous discharge. Stasis due to pressure produces edema, or dilatation of the veins of both limbs. Here we have changes which well illustrate how close these physiological changes approach pathological alterations. An old chronic catarrh of the vagina or cervix may recrudesce. The same may occur in a case of old chronic gonorrheal infection, in which suddenly during pregnancy acute symptoms reappear. And again the softening and hyperemia of the genitalia render them more susceptible for a new infection. We often see how with the beginning of pregnancy an erosion of the cervix is established or the patient develops the symptoms of an acute cystitis. It is a well-known fact that in cases of chronic gonorrhea pregnancy affords an opportunity for the infection of the upper parts of the genital organs, the infection spreading immediately after confinement to uterus, tubes and peritoneum. And then the sequelæ of pregnancy may be a wearisome sickness, sterility, sometimes a languishing state for lifetime.

I will only remind here of the various infections with other germs which are so frequently observed during pregnancy, labor and in the puerperal stage. There are infections of the ovisac, producing putrescence of the ovum, or tympanitis uteri, infections of the genitalia, producing locally endometritis, parametritis, infection and suppuration of the uterine appendages or the peritoneum, or giving rise to a general pyemia or septicemia.

The infection of the genitalia during labor is now generally recognized as an accidental and in a certain degree avoidable factor, thus, *sensu strictiore*, belonging to the chapter of pathology of pregnancy; but interesting for the biologist remains the fact that pregnancy, labor and the puerperium bring every woman in the great danger of contracting an infection of a more or less dangerous character. The probability of infection is furthermore increased by the infliction of injuries and wounds of the external genitalia, even if they are small and entirely within the physiological limits. Again I will simply mention here the possibility of the spontaneous rupture of the uterus during delivery.

Pregnancy is liable to bring about a recrudescence of old, non-infectious inflammations of adjacent organs or tissues. A chronic parametritis may return to an acute stage, but, on the other hand, we sometimes observe how changes in the blood circulation produced by the pregnancy result in the resorption of old exudates in the pelvis; firm adhesions between the uterus and other organs are softened and stretched by the growing uterine tumor. And again this pressing and stretching may have a deleterious effect upon some old encapsuled perityphlitic abscess, breaking its firm wall and leading to death by general peritonitis.

An other important question is the influence of pregnancy upon existing neoplasms of the uterus. It is a well-known fact that even small myomata during pregnancy increase to considerable size, the same change being sometimes observed in ovarian cysts. And again we must state that in rare instances

these increased myomata after confinement are reduced to a size smaller than the former one. We do not believe that pregnancy produces a distinct predisposition for the new formation of neoplasms, either benign or malignant, with the only exception of the deciduoma, which is a malignant growth directly originating from the chorion, viz., a product of pregnancy. There is a decided tendency of progress in malignant growths during pregnancy, as is best known in the cases of carcinoma of the cervix. A marked effect is exerted by pregnancy upon the visible lesions and the course of a syphilitic infection. Condylomata swell to voluminous tumors and increase the liability for septic infection. It is claimed that the syphilitic infection itself in pregnant women shows a more severe development. Within the limits of this paper I do not consider the influence of syphilis of the mother upon the fetus, and *vice versa*.

Another problem of extreme interest is the influence of pregnancy upon diseases in remote organs. It is generally recognized that tubercular processes, especially of the lungs, show decided aggravation during pregnancy, and artificial interruption of pregnancy is acknowledged to be justifiable in certain instances. Similar are the conditions in cases of diseases of the heart. In these patients, however, the greatest danger is produced by parturition itself. In both the tubercular patients and those suffering from heart trouble an eventual puerperal infection means a far more dangerous complication than in otherwise healthy *puerperæ*. That pyemic and septic processes can be the direct causes for the establishing of heart diseases may be merely mentioned.

Pregnancy is a complication in the course of all the acute infectious diseases, while, however, the effect of the infectious disease upon the pregnancy is the more noticeable. Premature interruption is the more common occurrence, and is for some of these diseases almost typical, *e. g.*, croupous pneumonia.

The organ most often injured by pregnancy is the kidney. The presence of albumen and casts in the urine of pregnant women is very common. In the majority of cases these alterations are transient and disappear immediately after the termination of pregnancy; in some cases, however, it has been observed that a severe nephritis has followed. Here we have once more an example of how certain processes, considered pathological under normal conditions, are physiological during pregnancy, and may, on the other hand, without distinct symptoms, be transformed into real pathological ones. The same gradual transformation is seen in some cases of psychic alterations during pregnancy finally leading to real psychoses.

So far I have dealt only with facts which well illustrate how pregnancy brings about various changes and alterations in the functions of the normal and diseased organs. But there is furthermore to be mentioned a group of diseases the existence of which is bound to the existence of pregnancy, as, for instance, hyperemesis gravidarum, eclampsia and osteomalacia. The two first mentioned ailments, if occurring in a severe form, may lead to the death of the sufferers, and again illustrate the dangers of pregnancy, even for the healthy woman. To this latter group belong, furthermore, a series of conditions the etiology of which was not understood until more recent investigations revealed a number of interesting facts regarding the pathology of the impregnated and developing ovum. I refer to the implantation of the egg outside of the uterus in tube or ovary in cases of ectopic pregnancy, or implantation at an abnormal site in the uterus itself, producing placenta previa. I may be allowed to allude more in detail to the condition known as abnormal adherence of the placenta.

In 1895 I was called upon to attend a case of placenta previa in which at the time of the two previous confinements the placenta had to be removed manually. Bimanual version was made, but after expulsion of the fetus the hemorrhage continued. Expression of the placenta was tried but failed. Therefore it was removed with the hand. It was found that the placenta was firmly adherent to the uterine wall, and at some places so that parts had to be left unless I wanted to take the risk of perforating the uterus. In spite of all analeptica the patient died two hours *post-partum*. Careful histological examination of placenta and uterus was made. In my report of this case (*Monatschr. fuer Geb. und Gyn.*, vol. iv) I was the first to describe a condition which since this time has been confirmed by other investigators. I found that there was complete absence of decidua serotina, the chorion villi being directly attached to the uterine muscles, on some places deeply invading into the blood sinuses. These findings easily explained the abnormally firm adherence of the placenta and the impossibility of completely removing the placental tissue even by means of the fingers. To-day it is almost generally acknowledged that the histological picture of chorion villi penetrating into the musculature is typical in cases of abnormally adherent placenta.

In a certain way analogous is an abnormally firm adherence in some cases of hydatiform moles. Solowej reported a case of hydatiform mole in which the villi completely penetrated the uterine wall and by way of the blood vessels finally had grown into the vena cava. I published a case of malignant deciduoma which developed after the expulsion of a "destructive" hydatid mole. In this case I was able to prove a complete absence of decidua serotina, and therefore I feel justified in claiming an analogy between real adherence of the placenta and destructive hydatiform moles. Both conditions are due to a pathological implantation of the ovum and involve considerable danger for the patients.

If we are forced to consider the growing ovum as a parasite, even under normal conditions, the likeness is still more striking in these, luckily, rare instances, in which parts of the ovum directly invade into and destroy maternal tissues. While abnormal adherence of the placenta and certain cases of hydatid mole illustrate the destructive qualities of the ovum fairly well, a still more striking proof is given in the condition now usually described as deciduoma malignum.

Deciduoma is a malignant new growth, which develops after pregnancy in the interior of the uterus at the very place where the placenta was situated. The tumor penetrates the uterine wall, invades the blood vessels and forms, by way of transportation of small particles through the blood current into other parts of the body, early metastases, thus resembling the course of sarcoma. There are cases on record in which this growth developed during the time of pregnancy and metastases were formed while the ovum was still in the uterus. In other cases the place of the egg insertion was found in normal condition while malignant metastases were established in the vagina. Malignant deciduoma was observed after normal full term labor, after abortion and more often after discharge of an hydatid mole. In regard to the pathology of this interesting growth, I believe that deciduoma is a degeneration of the cancerous type of the epithelial covering of the chorion villi. This view was first promulgated by Marchand, and in several publications confirmed and enlarged by myself. Based

upon the examination of a number of hydatid moles, I was able to show that in all cases of hydatid mole, in which at a later date the development of a deciduoma was observed, the mole itself revealed certain characteristics of malignancy. I found that in these moles the protoplasmatic outer layer of the villi, the syncitium, had invaded the deeper stroma of the villi, entirely analogous to the condition of the epithelium in cases of cancer. In spite of contradictory views, expressed by other investigators, I still adhere to my belief that these changes in the syncitial covering of the villi must be regarded as characteristic for malignancy.

While the last word has not yet been spoken in regard to the etiology and pathology of this growth, this may be stated with positiveness, that the modern understanding of this tumor formation has brought about a complete revolution of our views regarding the possible pathogenetic aspects of pregnancy. This remarkable fact at least has been established, that the ovum or, more exactly, certain cellular elements of the ovum, are liable to give rise to the formation of a malignant growth, and we have found that this cancerous transformation of the ovum may already begin during pregnancy.

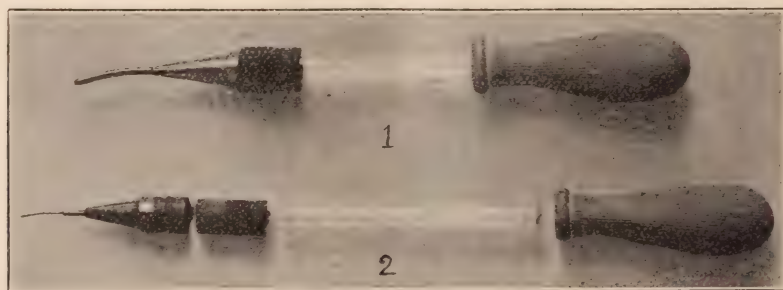
And with this I will close the consideration of the importance and influence of pregnancy upon the life of womankind. I trust that I have been able to show that the changes and alterations are manifold. As stated in my introductory remarks, to consider all of these changes in detail would fill a book, and therefore I have limited myself to a consecutive, but by no means complete, survey of those conditions which illustrate the influence of pregnancy upon the general condition of the body, upon the function of normal and diseased organs, upon general disease, and briefly of the origin of diseases during pregnancy, of diseases limited to the existence of pregnancy, and finally of the pathology of the ovum itself.

A CONVENIENT LACHRYMAL SYRINGE.

BY ARTHUR E. EWING, M. D., St. Louis, Mo.

(ILLUSTRATED.)

In the accompanying half-tone (Fig. 1) is shown the design of an instrument which combines for the lachrymal duct syringe the advantages of the rubber bulb, by which any degree of pressure may be recognized, and the glass



cylinder, in which the action of the solution may be seen. In its parts it consists (see Fig. 2) of the ordinary rubber nipple used for medicine droppers (a round bulb may be used if preferred), a glass tube of any desired size, a piece of rubber tubing, and the syringe tip. The last is made of silver, and at the end

toward the glass tube is fashioned with a socket, into which the tube fits snugly, but not too firmly, the glass then having a tendency to break. The joint is made air and water tight by the rubber tubing. The points may be of gold or silver, and of any size. For diagnostic purposes a fine gold point, blunt and a little grooved at the end, is preferable, as it can be passed readily into the normal punctum, the grooved part acting as the probe and yet not interfering with the flow of the fluid used. For puncta that are dilated or slit only moderately, a size larger, also of gold, serves best, being less liable to clog and admitting of a larger stream. Gold, ten or fourteen carat, is best adapted for these fine points; silver has proved to be too soft. The larger points, for canaliculi that admit of number six or eight Bowman probes, may as well be of silver. The outside diameter most satisfactory for each of these sizes is 0.6, 0.9 and 1.3 mm., and the points are continued in this size to lengths of three-eighths to three-fourths of an inch. The rubber parts will deteriorate, but being ordinary articles in the market, they are easily renewed. When they become a little loose about the glass this may often be remedied by knitting upon them a rubber band, such as takes the place of twine upon packages.

As there is nothing about any of the parts of the syringe that will corrode, it may be kept practically always sterilized in a strong aqueous solution of carbolic acid. For this may be provided a tall glass, such as is used for soda water or beer and is easily obtained. A layer of absorbent cotton placed on the bottom will prevent injury to the points when returned to the glass after having been used. In addition to sterilizing the syringe, the carbolized solution also prevents any deposits of salts within the points and keeps them open and ready when wanted, it being only necessary to remove the carbolic acid by placing in clean water for a moment. For further protection and cleanliness the instrument may be boiled *ad libitum*.

FALLACIES OF CYSTOSCOPY.

By LOUIS E. SCHMIDT, M. D., of Chicago.

There is hardly any other method of surgical exploration which has undergone a more extensive evolution and become more popular among the specialistic profession than cystoscopy. It is an old experience that nothing so much impairs the results and is apt to finally discredit a method, than overrating the same and not being aware of its shortcomings. For this reason it is my intention to quote some instances in which cystoscopy is apt to deceive the observer, thus leading to wrong conclusions and even causing unwarranted operations.

While the trigonum and the internal urethral orifice are the most interesting areas because of the overwhelming majority of morbid conditions located there, on account of this they are more apt to produce a wrong determination of the findings. It is nothing unusual that by surveying the trigonum a part of the free plane of the prism is covered by a protruding fold of the urethral mucosa. In this case the whole field of view is covered with a reddish tinge, so that the idea of an inflammation may be conveyed, although nothing of the kind exists. It is, therefore, paramount to be never satisfied with the results of a trigonum examination if not all the views taken from different positions of the cystoscopic beak are uniform, at least in their essential features.

Another point of view which quite often leads to error is the fact that the

ureteral openings lie in different cases in entirely different distances from the urethral orifice. Quite often the ureteral openings are overlooked because they are almost hidden in the orificial folds, and the cystoscope is pushed far into the viscus in the search for the ureteral openings, while the prism has already passed over them.

If inflammation or edema changes the appearance of the trigonum and makes its surface rough, the finding of the ureteral openings may become extremely difficult, and quite often small depressions in the mucous membrane are entered by a catheter because they are taken for the entrance to the ureter. Quite a damage can be done to the patient by poking around in an inflamed and emaciated mucosa, while in some cases even the absence of one kidney and its ureter has been diagnosed because the cystoscope failed to detect the ureteral opening. The first-mentioned mistake can be avoided in the following way: If there is any doubt as to whether one of the probable ureteral openings or niches is in fact the ureteral entrance, the finger is introduced either into the vagina in women or into the rectum in male patients, and this finger presses the doubtful area towards the cystoscopic window; in this manner the bottom of the niche is sufficiently exposed to make possible the decision whether in its depth the ureteral opening is to be found or not. The second difficulty referred to makes great demands upon the patience of the observer and upon the endurance of his eye. In such a case, nothing else can be done than to watch closely the area which corresponds in a symmetric sense to the place of the other ureter, and to watch for the squirting-out of the urine. The observation of the urinary whirl can be facilitated by feeding to the patient methylene-blue some time before the examination. The urine then acquires a green color in the kidneys, so that the whirl can be easily distinguished in the other fluid which distends the bladder. However, when there is pus within the viscus, and if slightly adherent to the trigonum, body movements will cause it to become free and to float in the water. This must not be mistaken for the whirl, which whirl may also have specks of pus coming from the kidneys.

Another source for error is the examination of the internal urethral orifice. There are two factors which are to be considered as the main agents in producing mistakes. One is, that the parts of the orificial circumference are naturally seen while they are very close to the cystoscopic window. That means that they are magnified in their appearance to the eye of the observer. If the Nitze cystoscope is used, objects are to be seen only in their natural size if the distance from the prism to the object is about 3 cm. The second factor is, that by the introducing of a rigid, straight instrument of considerable size, the opening and organs and tissues constituent to it are changed in formation and appearance. That this is so can easily be proven if we inspect a normal urethral orifice through a suprapubic incision, or if a cystoscopy is performed through a suprapubic opening. Then the urethral orifice appears as a very small fovea surrounded by a few shallow grooves. Quite often, either hypertrophic or edematous folds of the internal urethral orifice, magnified through the optical apparatus, impose upon the observer as tumors, polypi; even suprapubic incisions have been made on the force of this erroneous diagnosis. In order to avoid this mistake, the following points must be kept in mind: These mucosa folds appear, as a rule, in great numbers. They are not transparent at all, and always convey the impression of rigidity. The polyp in the neighborhood of the orifice is a very movable object. It floats

around like water-plant. It is always transparent, even to a high degree, and the loop of bloodvessels which run through it can always be observed.

Nowadays a point which has come into quite considerable prominence is the position which cystoscopy takes in judging probable prostatic changes, so far as they can be diagnosed by means of cystoscopy.

This is extremely important in the preliminary examination for a Bottini operation. While it is true that considerable information can be gained so far as the propriety of the Bottini in a single case is concerned, a superficial cystoscopy without minute appreciation of the condition and findings, will lead to fatal errors.

In the first place, it must be kept in mind that the essential information which we can get by cystoscopy in proposed Bottini operations is the decision whether a barrier exists which can be severed by a galvano-cautery blade with probable success.

Now, it is paramount that this barrier should belong to the bladder cavity and not to the prostatic urethra. But quite often the case is as follows: Because a straight rigid tube is passed through the urethra, nodules are pressed into the trigonum and consequently into the cystoscopic view, yet such nodules, or at least the bulk of their mass, really belong to the territory of the prostatic urethra even though they just border on the trigonum. A superficial cystoscopic examination shows now that a barrier exists. A Bottini incision can be made on the force of this diagnosis and no success is accomplished if the case ends favorably—while quite often serious consequences follow this erroneous diagnosis. The operator, still feeling resistance to the glowing blade, keeps on cutting, according to the rule, until the whole obstacle is severed. Now, these cuts inside of the prostatic urethra lead to serious complications, among which phlebitis and urinary infiltrations are the most frequent. The diagnosis of the barrier which can be successfully and dangerlessly operated by the Bottini method can only be made if this barrier is shown positively to belong in fact to the bladder. This can be done by noticing the following points: The protrusion and elevation into the viscus must appear as covered with bladder mucosa and not with the urethral mucosa, thus proving that the mass was in the territory of the bladder before the cystoscope was introduced. The *bas fond* behind the barrier must be a deep one. If the ureteral orifices cannot be seen, there is always cause for suspicion that the tumor was pushed into the bladder.

Another mistake which is quite frequently made is the erroneous diagnosis of a trabeculated bladder, when in fact there is none. In nervous individuals, especially in women, the bladder wall reacts to any stimulation; the touch of the beak or the heat of the lamp often cause circumscribed contractions, which if very energetic make the muscular bundles protrude into the bladder. The trabeculated bladder should be diagnosed only if the trabeculation is a uniform one all over the fundus and vertex, and if surveying the different parts of the bladder proves that the protrusion of muscular bundles is a constant one and not a temporary phenomenon only.

One of the most pronounced conditions which lead to erroneous diagnosis is the edema bullosum. Not only by its impressive appearance but also by the presence of the causative adjacent pelvic tumor, it quite frequently leads to the diagnosis of a proliferating malignant tumor. It is an interesting fact, for instance, that one of the old Nitze cystoscopic atlas pictures doubtless repre-

sents an edema bullosum, although at that time it was not diagnosed, but still in the cystoscopic literature is spoken of as a cancer.

Tumors which are covered with incrustations, quite often are taken for calculi, while calculi partly imbedded in diverticula between the succulent folds of an inflamed mucosa are taken for tumors.

Tumors which are pedunculated, but on account of their mushroom-like form cover their pedicle, are considered malignant on account of their broad base. Now, all these doubtful cases can be cleared up if, in order to complete our examination, an operative cystoscope is used following the examination by the first instrument. With the cystoscopic forceps the objects should be grasped and moved around in different directions, so that sufficient information can be obtained in order to establish a correct diagnosis.

Enlarged veins or varicosities sometimes are seen at the lateral walls of the bladder. They appear on observing from above with a bluish black color and are apparently on a broad base. When examining from the side they are slightly translucent and of a pinkish purple color.

The error to which I wish to especially call attention is the diagnosing of cystoscopic burns as idiopathic ulcers. I saw not only diagnosed, but even demonstrated, such burns as ulcers. While the inexperienced cystoscopist is more apt to burn the bladder, he is liable by the same reason to misunderstand and misrepresent these burns. The experienced man will easily recognize them for what they are, because of their location and the lack of inflammatory reaction in their neighborhood. Furthermore, there is a decisive test, namely: these burns heal up inside of ten or fourteen days without any curative interference, which is never the case in actual ulcers.

There are general conditions in the way of examining which are apt to influence the reliability of determining cystoscopic findings. If the bladder is distended with air, there is such a shining appearance of the mucosa that the multitudinous and various reflexes make it quite difficult to find out exactly about the details. This condition is increased during an extended examination, through the urine which flows down out of the ureters. Another complication may arise through not working with an appropriate optical apparatus. It must not be forgotten that the total examination of the bladder furnishes combination pictures only. A proper optical apparatus enlarges the field of view, and this is one of the prominent features of Nitze's cystoscope. Pictures derived from the observations through a cystoscope of direct view and without the view being enlarged with an optical apparatus are apt to lead to misconstructions, because they are combined out of views of very small areas.

THE SIGNIFICANCE OF APHONIA IN ANEURYSM OF THE ARCH

BY WILLIAM PORTER, M. D., of St. Louis.

The radical cure of aortic aneurysm is yet an hypothesis, but the care of the patient and the prolongation of life is a problem, and partial solution is possible. I firmly believe that when an early diagnosis is made, and the proper care instituted, there may be an extension of double the usual life expectancy in such cases. If ever aortic aneurysm is catalogued as a condition in which cure can be effected, it will be when we learn to recognize the lesion in its incipency, and to this end the study of each symptom is important.

Again, while I have not statistics to prove the assertion, I cannot but think that aneurysm is of more frequent occurrence than formerly. It may be that this is only apparent because of the better diagnostic methods of modern practice, but surely there is an increase of the conditions that we know are etiological factors in the determination of aneurysm. Rheumatism, lithemia and the uric acid diathesis are almost a sequence of the urgent, intense American life, while notations of specific disease are found on a large proportion of the pages of our case books.

Be this as it may, each case of aneurysm is a study and each case of aortic aneurysm is a problem not only in itself, but because of the dependent phenomena always shown at the site of the lesion, or in adjacent organs.

While many signs are more or less important and several of these combined may warrant a diagnosis, yet there is only one positively characteristic of thoracic aneurysm, and that is the presence in some part of the chest of a pulsating tumor, not to be mistaken for the heart, but which beats isochronously with the heart. Balfour adds that each aneurysmal impulse is as forcible as the heart-beat, and that the expansion is in every direction. While this is true in many cases, possibly the statement should be modified where the aneurysm is sacculated, and particularly if it is partly filled with laminated fibrin. When the aneurysm has developed towards the outer thoracic wall the impulse often seems greater than that of the heart.

I have elsewhere (American Laryngological Association, 1899) called attention to the value of the intra-esophageal method of determining the presence of the abnormal aortic impulse and the possibility of auscultating the aneurysm by way of the esophagus (*N. Y. Med. Jour.*, December 9, 1899). To more than mention this, which with me is now something more than experimentation, is not my purpose in this paper.

The dyspnea of aneurysm, while generally a laryngeal symptom—to be mentioned presently—is sometimes caused by pressure upon the bronchial plexus, with consequent bronchial spasm. In one case this was the only form of dyspnea present, and its severity was increased by the recumbent position.

Tracheal tugging and tracheal pulsation, as well as dysphagia, may appear; the latter varying in intensity at times, but generally at a stage when there is other and more positive evidence. They are not symptoms upon which great reliance can be placed in the early stages.

The Roentgen rays promise much and have added to the interest of this study. So far, its evidence has been corroborative rather than original, but even so, it is one of our most valuable aids.

Pain in the region of the aorta is frequently spoken of as characteristic of aneurysm, but I have not found it reliable or constant. The pain of pressure and tension, so often mentioned in books, is not only often absent, but is almost exactly simulated in many cases of neurasthenia—in fact, in the latter condition it is of frequent occurrence. I have had patients who for years complained of the pain usually referred to as aneurysm who were only convinced of its neurotic origin by the lapse of time.

Far more indicative and just as frequent is pain in the region of the fifth or sixth dorsal vertebra. I remember a case in which this was the only symptom as far as I could learn, though I had no personal knowledge of the history. The patient, a man of forty years of age, died from rupture a few minutes before my

arrival. It was stated that he had been treated by a noted neurologist for spinal irritation, and the autopsy showed vertebral caries from pressure. This pain may also be found in neurasthenia, but in these cases it is lower—opposite the solar plexus—or, as a point of second selection, about the fifth cervical.

Time will not permit me to review the evidence obtained by direct auscultation and percussion in aneurysm. I would, however, emphasize the importance of the arterio-diastolic murmur and shock over the point of greatest dullness, especially if the second sound at the cardiac base is clear and distinct. The conveyance of the systolic aneurysmal bruit along the arteries, in some cases as far as the brachial artery (Glasgow), is also a point worth remembering.

But it is in the study of the laryngeal symptoms that I wish to confine myself in this paper. Let me at the outset recall the fact that pressure upon the recurrent nerve from aneurysm or thoracic tumor does not necessarily produce aphonia. I deem it of value to mention this because it is to be noticed that in many clinical reports the statement is made that the laryngeal evidence was negative because there was no aphonia.

The phenomenon of compensatory arytenoid movement (which formed the basis of a paper by the writer in 1895) is now sufficiently established. The laryngeal image may be seen to be normal in appearance and function except in one respect—where there is paralysis of one recurrent nerve, most frequently the left, the corresponding cord may be seen in the cadaveric position, while the opposite cord may cross the median line and phonation be possible.

In such cases, however, it is impossible that equal tension be made on both cords, and the unequal vibration will produce decided change in the voice—a hoarseness (W. T. Porter), a monotone, and inability to reach a high note (Newman, Mulhall). One or all of these symptoms may be present. Sometimes at the beginning there is not even a loss of movement, but a congestion, consequent, doubtless, upon laryngeal irritation. The only subjective symptom at this stage may be a more or less constant laryngeal cough. In some of these cases the pressure upon the nerve being increased by the growth of the aneurysm, complete aphonia results.

It has been noticed that a bilateral adductor paralysis may be present when only one recurrent nerve is involved. It is possible (Dr. George Johnson) that one recurrent center takes on increased and compensating action when the other fails, and, being stimulated beyond the normal, it, too, may in time fail in its function.

The dyspnea of aneurysm, though not a constant symptom, presents many phases and should not be overlooked. When it is distinctly laryngeal it is associated with and dependent upon motor paralysis of one or both sides. Sometimes the narrowed glottis is still sufficient for easy respiration during quiescence, but exertion produces greater inspiratory demand, and during the effort the paralyzed cords are drawn violently downward and inward, with resultant apnea.

In conclusion, let me urge the examination of the heart and aorta in all cases where there is a unilateral congestion or faulty movement in the larynx, and on the other hand a laryngoscopic examination in all cases of suspected aneurysm. In at least three cases the laryngeal evidence was to me the earliest indication.

Percussion shows the great increase of dullness to the right. (See diagram.) This diagram is the actual heart tracing made according to the method of Lees

and Poynton, and represents the actual absolute cardiac dullness. There is no evidence of any hypertrophy of the left ventricle. On palpation a very distinct thrill is felt, limited to the pulmonary area. On auscultation there is an exceedingly rough systolic murmur, synchronous with the thrill. This murmur is heard loudest in the second left interspace just to the left of the sternum. It is not transmitted up to the vessels of the neck. It can, however, be heard at the apex, though not nearly so distinctly. It is not transmitted to the angle of the scapula.

The second pulmonic sound is very feeble.

The pulse is small, irregular, and varies from 102 to 120.

During the two months that the child has been under observation, the temperature has been slightly above normal most of the time, never exceeding 100.2°, however.

Considering the character of the lesion, one would naturally be suspicious of such a temperature, as perhaps indicating the beginning of a tubercular process, seeing that from the nature of the case this is the valvular lesion which predisposes to the affection. Repeated careful examinations of the lungs have, however, invariably been negative. The moist rales present on admission had disappeared after a week's stay in hospital.

The temperature might possibly mean the existence of a subacute endocardial inflammation, the result of the diphtheria, though this must necessarily remain a matter of conjecture.

It is not at all uncommon in this form of lesion of the right heart to note the absence of both dyspnea and cyanosis for a comparatively long period after birth, so that their absence for three and one-half years in this case would not militate against the diagnosis of congenital valvular lesion.

DELIVERY OF A DOUBLE MONSTER (DICEPHALUS).

By P. T. B. SHAFFER, M. D., of Elizabeth, Pennsylvania.

(ILLUSTRATED.)

The monstrosity shown in the accompanying illustrations was born of American parents, both of German extraction. The mother is a primipara, æt. thirty. In the progress of labor the left foot presented, and I waited until the os was fully dilated, when I ruptured the membranes and all of the liquor amnii came away with a rush. The right foot was then brought down, having now the fetal abdomen to the maternal left. I then found the left hand of child's left arm and brought it down, then the right arm, when an inferior maxilla was discovered by an examination over the abdomen of the fetus. Not fully satisfied because of the resistance offered, I investigated further and found another inferior maxilla by examination over the right side of the fetus. Still bent upon hasty delivery, finger was inserted into the mouth of the under head, rotating the face with the chin in the right sacro-iliac synchondrosis, raising the fetal nates toward the maternal pubes; this face swept the sacral cavity and the other, with gentle traction, followed, labor being completed in an hour from the bursting of the amniotic sac. The fetus was alive at the commencement of labor, but died before the heads had passed through the pelvis. There was but one cord, and a normal placenta of moderate size. No instruments were used, nor was any anesthetic. The passage of the heads ruptured the perineum, requiring suture. The mother's recovery was uneventful.



FIG. 1.

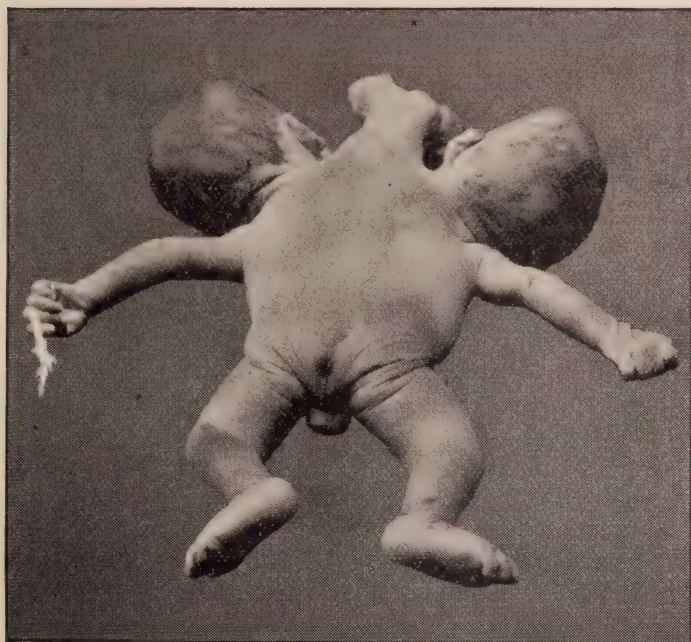


FIG. 2.

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HEINZ WOHLGEMUTH, M. D.,

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EDITORIAL COMMENT.

THE ST. LOUIS MEDICAL LIBRARY.

For three years the doors of the Medical Library have been thrown open to the profession. The invitations to become members sent to physicians in this city, of all schools, have met with acceptance by a number not proportionate to the many physicians in St. Louis, which is rather a sad reflection on the literary habits and tastes of those remaining outside the pale of the Library.

The active members have labored earnestly in its behalf, and the medical profession of this city certainly owes them a debt of gratitude for establishing and maintaining an institution whose noble purpose is to instruct those who hold the lives of many in their hands in the best and latest methods to cope successfully with this or that disease.

When one considers the many advantages there are to be gained by being associated with the Library, it is indeed strange that every physician does not appreciate the benefit laid at his door.

All will concede that it is the duty of every medical man to do the best in his power for those who place themselves confidently under his care. By neglecting to keep himself *au courant* with the advanced thought of the day he is undoubtedly failing in this regard. Where can he better keep abreast with the progress of medical science than within the walls of the St. Louis Medical Library Association? It is folly to suppose that any man has in his office as many journals as are on the shelves of the Library. However, granting that he has a goodly number, it is safe to say that they are not in such a condition that articles on any one subject are obtainable at a moment's notice. By referring to the index of the Library he will find not only the books, but also the original articles of the more important journals, arranged and classified so that his work is greatly facilitated and much precious time is saved thereby.

It sometimes happens that physicians in looking up articles say: "I have the journal in which that article appears," but until they consulted the index did not know or had forgotten that such articles were in their possession. They were as utterly lost as if they were buried under the ashes of Mont Pelee.

This Library, so well started, is destined to become more and more valuable each year, and we trust that with the co-operation of each member of the local profession it will in time rival the Library of the New York Academy of Medicine or that of the College of Physicians and Surgeons in Philadelphia.

THE COMMUNITY OF THE INTERESTS OF THOSE WHO SPECIALIZE IN MEDICINE.

At a recent meeting of the Society of Dental Science of this city, one of the speakers expressed a thought which implies a lesson for those of us who follow a more or less limited line of practical work. This gentleman's idea was to broaden the usefulness of the society by the admission of new members, not dentists, but men selected from the various correlated specialties; men who could direct the dentist's ideas into channels outside his own specialty, and who themselves might at the same time profit by the association. The idea is in itself a worthy one, for no conscientious practitioner doubts that our chief aim here, aside from the general advancement of science, is to do the greatest possible amount of good for those entrusted to our care. Other things being equal, the man with the broadest knowledge is the most capable practitioner; hence it appears that the very contact which the Society of Dental Science fosters, might prove of no less benefit to the aurist, rhinologist, oculist and oral surgeon, not to mention others, than to the man who fills teeth and fashions plates.

Eminent orthodontiasts inform us that certain nasal catarrhal affections depend upon malposition of the teeth: and that further it is little use to treat the nose until the deformity is corrected. But, on the other hand, the teeth will not stay in place unless the nasal affection is properly cared for. Now, if the patient's best interests are to be considered, is there not in this one instance at least a decided necessity of the man who treats the teeth and the man who treats the nose consulting together.

But this is not all by any means, for certain dental subjects interest the aurist in no small measure. Consider, for instance, the injuries and diseases of the maxille which are associated with a menace to the eustachean tube; these surely require the care of both the gentlemen just mentioned, and it is by no means clear that the patient's best interests are conserved by the fact that each is unacquainted with the other's methods.

Tumors of the superior maxilla not infrequently, by their invasion of contiguous tissues, go so far as to cause cerebral symptoms, in which case the dentist must know how to avail himself of the neurologist's diagnostic and prognostic aid; on the other hand, the latter can only advise intelligently when he knows something of the possibilities and the limitations of oral surgery.

The oculist holds, in many respects, a still more intimate relation to the dentist. For example, fractures of the orbital plate of the superior maxilla cause the most intense ocular symptoms, as is well known at times. The dentist is, of course, in no position to treat them, and equally helpless is the oculist when called to such a patient in whom the injury just mentioned has been so extensive as to render necessary the intelligent attention which is now accorded the fractured alveolar process.

To go further, cleft palate makes, if neglected or improperly treated, work

for dentist, oral-surgeon, aurist, laryngologist, and stomach specialist; and while most specialists desire practice, still the honest ones do not want to get it in that way. The moral is plain.

THE USEFULNESS OF A FAD.

As fads in fashion, so fads in medicine. Just at present there is a vast amount of literature being published upon prostatectomy. Why an operation which has been done more or less successfully for the last twelve years should call forth now such a flood of literature, is explicable only upon the assumption that there is some stimulus of no small moment.

However far a fad may lead, sooner or later the subject recedes to its normal level and resumes a solid basis. Fads, besides furnishing amusement and entertainment to those engaged, emphasize actual needs, and, if nothing else is accomplished, are justified in that they stimulate original investigation and act as a suggestion to some conceptive genius, when otherwise the subject would have passed unnoticed.

While a heated discussion as to the relative value of, and the indications for the Bottini operation, perineal prostatectomy, suprapubic prostatectomy, or the combined operation, by this or that method, is going on, it is pleasing to note two articles reporting the results of careful and painstaking pathological investigation. In the January and February numbers of the *Ann. des Mal. des Organes Genito-urin.*, Halle and Motz publish their histological findings in one hundred bladders of chronic cystitis, including the prostatic bladder, and show how that bladder differs from others of chronic inflammation; namely, in the formation of trabecule and atrophy of the external muscular coat, and rather look for the beginning of this process in a primary change in the blood vessels of an old subject with diminished vitality of tissue; while Greene and Brooks (*J. A. M. A.*) April 26, 1902) report their microscopic findings in fifty-eight hypertrophied prostates and come to the conclusion that the hypertrophy of the organ is the result of a previous and prolonged chronic posterior inflammation.

If Greene and Brooks are right, then we must go further and begin to treat the prostate before the hypertrophy takes place—and this will no doubt be a great triumph for those who discredit all operative procedures and rely upon conservatism and palliation.

THE LEGAL RESPONSIBILITY OF PHYSICIANS IN ANCIENT TIMES.

Medicine in its primary inception was a domestic art, practiced by the member of a family seemingly possessed of the greatest skill for soothing and relieving pain, according to the understanding of the times. Natural aptitude and the tendency toward the division of labor common to all mankind, developed competency and superiority in this as in all other arts. Such medical knowledge as was evolved in man's struggle with nature and his fellow-beings gradually passed into the possession of the priests, and by them was guarded and utilized. Thus, with every race as far back as history records, we find the early practice of our profession to have been usurped by the priests. This condition existed until the more enlightened period, marked by Grecian supremacy, when the healing art was no longer limited to the priesthood. With the separation of medicine from religion there was necessity to define the responsibility of the physician to the law—a necessity which did not previously exist, as the priesthood, being in favor with the gods, could commit no error. This question of

legal responsibility of the physician was discussed in the *Muenchen. Med. Wochens.* of March 25th, by Dr. J. Pruss, who brings out particularly that the law of ancient times seemed to have had more regard and its interpreters more consideration for physicians, than is frequently observed in the present day.

Investigation of the subject shows that among the Greeks the immunity of the physician from punishment for failure to save a patient's life was first recognized in legal manner. In Plato's draft for a new constitution it was first suggested that a physician cannot be made legally liable for the death of a patient if the death was not due to his practice. Then, as now, was heard the complaint, that only physicians have the right to kill other people without being killed in reparation, which complaint Philemon expressed in a characteristic epigram. Similar observations were made in Rome, though of course here we must not forget that the Roman citizen met the immigrating Greek physician with hate and contempt, and did not even deter from denouncing his presence being for the purpose of exterminating the Romans with poisonous drugs. This feeling was expressed by Plinius in his mild sarcasm, that only physicians enjoy impunity for homicide.

In India, the law of Manu declared that physicians who committed malpractice in treating animals should pay the lowest rate of fine; if in man, the middle fine. Later an addition was made to the law, which declared that if malpractice was done in treating a royal officer, the highest fine should be adjudged. The most detailed consideration of this topic is found in the Talmud of the ancient Jews, here, first of all, is a collection of laws called Tosefta, collected about 200 A. D., which of course contained many of much earlier existence. In Tosefta a clear definition is made between error and negligence on the part of the physician. One section states that a physician who practices with the permission of the state must be free from punishment if the damage on the patient was caused by an error, but he must suffer punishment if he should harm with intent. Regarding error, another section states that physicians, while not responsible to the judges of this world, are accountable to the Courts of Heaven. Quite different, though, was the view taken of negligence, concerning which the law states that if the physician wounds the patient more than is necessary for his cure, he is to suffer punishment accordingly, viz.: If he treats his slave on account of an eye disease and this eye becomes blind, the slave is to be freed by him. The Gemara, another collection of Jewish laws, states that if a man wounds another he is guilty before the law, but if a physician performs a surgical operation he is immune from punishment, as is shown by the teachings of the Bible—the Bible containing the law that a man who kills another unintentionally is considered a homicide and is to go into exile of his own volition, but if the man killed the other with intent or intrigue, he is to be put to death.

These Bible laws did not allow exceptions, and therefore it was concluded that if the death of a patient resulted from error of the physician, the latter is to be exiled. On the other hand, this law protected the physician from capital punishment, since it is clear that in operating on a patient the wound inflicted is without intent to do harm. It is very noteworthy and interesting that the collection of laws mentioned above (Tosefta) always makes distinct reference to the physician who practices with the permission of the state and emphasizes that quacks are subject to the common law and are liable to its penalties if they do harm. With the downfall of the Jewish empire these laws were no longer in force, but even then the rabbis declared that no one should treat a patient who was not educated for it, otherwise he was liable to become a murderer, and if a physician ever became conscious that the death of a patient was due to an error in his treatment he should go into exile of his own will.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

A Study in Antiperistalsis of the Intestines (Gruetzner).—HEMMETER, Baltimore (*Archiv fuer Verdauungs-Krankheiten*, vol. viii, pt. 1-2), in support of the observations and experiments of Gruetzner, who injected into the rectum of small animals, sawdust, charcoal, etc., in suspension in physiological salt solution, and found these substances six hours later in the stomach and small intestines, gives the results of his investigations on this subject. His experiments were carried out on the human subject, as well as in animals. Charcoal, bismuth subnitrate, starch granules, etc., which he injected into his own rectum, and likewise into those of students, could be removed from the stomach several hours later. These experiments were carried out under the strictest precautions. The author's conclusions are as follows: There is a movement of small particles from the rectum toward the stomach. This movement is augmented when particles of lycopodium, starch granules, bismuth subnitrate, etc., are injected in suspension in physiological salt solution. It is interfered with or entirely suspended when the substances are in weak solution of potassium chlorate or hydrochloric acid.

The movement is peripheral. Sections through the intestines invariably show these particles lying immediately upon the epithelium of the mucosa.

The wandering of these particles toward the stomach goes on simultaneously with the central movement of the fecal mass toward the rectum. This can be observed by the aid of the X-ray in small animals, such as the cat, mouse or rat, after the injection of subnitrate of bismuth into the rectum. Stained particles of lycopodium, sawdust, etc., can even be observed through the intestinal walls of small animals.

This antiperistaltic movement cannot carry the ingesta forward in large masses, and cannot, therefore, be used as an explanation of the digestion of nutrient enemata.

Observations Concerning Cholelithiasis.—BOAS, Berlin (*Muenchener Medizinische Wochenschrift*, No. 15, 1902).—Much has been accomplished in recent years in determining the etiological factors involved in the development of gall-stones. Based upon animal experimentation and careful observation, these new theories are apt to be lasting. Unfortunately, progress in the diagnosis of cholelithiasis has not gone hand in hand with the pathogenesis. Atypical cases of gall-stones are still very rarely diagnosed by those moderately skilled in diagnosis. The author calls attention again to a point in diagnosis to which he referred several years ago, and which has not received proper consideration. At that time he stated that in cholelithiasis there is marked pain upon pressure in the region of the twelfth dorsal vertebra, two or three finger-breadths to the right of the spinal column, extending sometimes to the posterior axillary line, etc. The same exists in acute attacks, and continues for a long period after the acute period has passed. It can even exist for years during the latent period. The pain in the marginal and vesical region may have long since disappeared, while the dorsal pains remain. There are cases, however, in which this sign is absent. In determining the sensitiveness of the liver in inflammatory conditions, attention should be given to the following three regions: (a) the border of the

liver and the region of the gall-bladder; (b) the subcostal portion of the liver; (c) and the posterior surface.

In the differential diagnosis, duodenal ulcer, gastric ulcer, and hyperchlorhydria, intestinal neuroses, etc., must be duly considered.

In the discussion of the treatment, the author touches upon the use of Carlsbad water, the proper diet, forced breathing, and massage.

An Unusual Case of Pneumo-Thorax.—JACHMANN, Hamburg (*Zeitschrift fuer Klinische Medizin*, part 1-2, 1902), reports a case in which the physical findings, auscultation, percussion, the displacement of the heart, the position of the diaphragm on the right side, all pointed to a pneumo-thorax. The gradual development, the absence of subjective symptoms, the general condition of the patient, were rather inconsistent with this diagnosis. It was verified, however, by the X-ray. There was no evidence of any communication between the pleural sac and the external world; consequently there must have been an internal fistula. The etiology presented many difficulties. The absence of any history of tuberculosis, the favorable outcome, the absence of tubercle bacilli, etc., made it possible to exclude tuberculosis. There was no evidence or history of trauma. The gradual development, too, spoke against this.

The case must be considered as one of spontaneous origin, due to the development of a pleuro-pulmonary fistula. As was noted by the physical examination and the symptoms of the patient, the fistula closed for a period of ten days and the lung resumed its normal condition, after which time the fistula must have reopened, for air again gained entrance to the pleural sac. The point of chief interest in this case is the discrepancy between the subjective symptoms and the objective findings.

The author lays great stress upon the importance of the X-ray as a diagnostic aid in doubtful cases.

Heterochylia.—KORN, Berlin (*Archiv fuer Verdauungs-Krankheiten*, vol. viii, pt. 1-2).—This term was introduced by Hemmeter for the classification of those cases of nervous dyspepsia in which there are sudden and frequent changes in the gastric secretions. In such cases there have been observed within one week after test meals normal acidity, hyperacidity, and anacidity. The author reports a series of eleven cases in which such a condition prevailed.

In seven of these cases the possibility of any anatomical changes in the gastric mucosa could be absolutely excluded. The variation in the acidity must be explained by a nervous influence acting upon the secretions in both an augmentatory and an inhibitory way. In three cases in which there were pathologic changes there existed also this variation. Here there was no doubt a combination of organic and nervous involvement of the stomach.

In order to avoid false conclusions, frequent examinations of the gastric contents should be made in all doubtful cases.

The Clinical Importance of the Personal Factor in Disease.—DUCKWORTH, London (*Berliner Klinische Wochenschrift*, April 21, 1902).—The tendency of medical study at the beginning of this century is markedly set in the direction of the *quidquid irritans* and too little in that of the *quidquid irritabile*. Younger physicians are inclined to reckon without their hosts to a degree that is likely to retard the progress of medicine. Koch's discovery of the bacillus of tuberculosis has led physicians to regard the parasite as of greater importance than its host. The old doctrines of the several diatheses are considered to be inapplicable to these enlightened days. We are apt to consider the phases of disease from the standpoint of the pathological laboratory, rather than from that of the hospital wards.

Scrofula and tuberculosis are now considered identical. The author still

maintains, from his clinical studies, that one may be scrofulous for life without ever becoming "tuberculized." A similar inadequate idea largely prevails in respect to rheumatic, gouty, and strumous tendencies. In all of these matters the personal factor is overlooked. The charlatan directs his efforts to the treatment of disease, while the true physician strives always to treat individual patients.

An Experimental Investigation Into the Causes and Treatment of Diabetes Mellitus.—CROFTON, Philadelphia (*American Journal of the Medical Sciences*, April, 1902).—Prompted by the investigations of Lepine, Arthus, Kraus, and others the author conducted a series of experiments with reference to the self-destruction of the blood-sugar, and the existence of a sugar-splitting ferment.

He found that the blood and lymph incorporate a substance that can destroy sugar; that this agent of the blood is contained in the corpuscles and not in the serum; it is unorganized and not dependent on the life of the cell. The glycolytic ferment of the blood is present in the white cells, and their degeneration must occur before the ferment can develop its powers.

The known ferments of the pancreas placed into sugar solutions do not possess the power of destroying it, even though they remain in contact for many months. The glycolytic ferment and solutions of trypsin are, however, so similar that they cannot be distinguished by known methods. For the present they must be considered identical.

One of the causes, if not the only cause, of diabetes is a reduction of glycolysis. In the present state of our knowledge we are not justified in assuming pancreatic disease in all cases of diabetes; it is possible that functional affections of the organ may exist during life that leaves no anatomical trace.

Based upon his experiments the author thinks that the following measures promise some success in the treatment of diabetes: (1) the infusion of chyle or of blood from a healthy animal; (2) the injection of leucocyte extracts; (3) the injection of trypsin; (4) the injection of vegetable glycolytic ferments. Experiments have, in a measure, demonstrated these to be plausible procedures. Others are now being conducted.

Three Cases of Meningitis in Which Kernig's Sign was Persistently Absent.—CLARK, Philadelphia (*American Journal of the Medical Sciences*, May, 1902).—In one case of acute cerebro-spinal lepto-meningitis, whose bacterial nature was not determined, and two cases of tubercular meningitis, Kernig's sign was persistently absent. There was no difficulty at any time to extend the leg beyond an angle of 150 degrees. This extension did not cause undue prominence of the hamstring tendons, nor apparently hurt the patient. These cases confirm the opinion that this sign is especially unreliable in tubercular meningitis.

Raynaud's Disease.—KING (*American Medicine*, May 17, 1902).—The disease is best defined as a vasomotor neurosis, dependent on an exaggeration of the excitomotor powers of the central nervous system, causing angiospasm in localized areas in various parts of the body, and characterized by three grades of intensity: local syncope, local asphyxia or cyanosis, and local gangrene. It is characterized by symmetrical gangrene of the extremities, though there are sometimes exceptions to this. In the case here reported it appeared first in the left great toe, then involving successively the right and left forefinger, the right great toe, and the right fourth toe. The patient also showed peculiar pulmonary symptoms which were interpreted as local syncope and cyanosis. There was also vertigo without palsy. The process continued for a period of two or three years. He suddenly lapsed into coma while engaged in some light manual labor and died shortly afterward. An autopsy was not permitted.

A Bilirubin Stone in an Echinococcus Cyst.—KRAUSZ, Budapest (*Wiener Klinische Rundschau*, No. 14, 1902), reports a case of echinococcus cyst of the liver in a young man twenty-one years of age. Ten liters of a dirty green liquid were removed through operation. The color gave the impression that there was an admixture of bile. The chemical test, however, did not corroborate this belief. The individual cysts were found to be sterile. Two days later three red pigmented concretions, weighing 7.5 grams, were liberated from the wound during irrigation. These in all probability came from a diverticulum of one of the bile ducts. An active inflammation was no doubt produced through the entrance of a small cyst into the bile ducts and a diverticulum resulted. Biliary concretions formed in the pocket which was in communication with the large cyst. The stones, therefore, were not liberated at once, but followed afterwards.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Rhinoplastic.—NELATON (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, Tome xxviii, No. 14).—In this well-illustrated article is presented a method of making a new nose which seems, on paper at least, to possess advantages sufficient to recommend it over all those which have been practiced heretofore. The steps of the operation are the following: 1. An incision is made along the borders of the old nose, and the tissues which remain of it are swung toward the median line, where they are sewn together and thus form a base for the new structure. 2. A horseshoe shaped flap is cut from the frontal region (convexity upward) down to the bone, and then a saw is so placed upon the latter that running in its plane, the outer plate of the frontal bone will be removed, still attached to the soft structures. 3. The entire flap is divided into two lateral segments. 4. Each of these flaps is turned down to the bed already prepared for it, where both are sewn together in the median line, and then united at their outer edges to the skin where it was first incised at the borders of the old nose. Thus the new organ gains the unyielding support of the two bony plates which have been cut from the frontal plate, and in consequence of this fact, its shape is better preserved than can be the case if any foreign body be utilized, and certainly better than would have been the case if only a soft flap had been secured in any of the old ways.

The Surgical Treatment of Lung Diseases.—QUINCKE (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, Bd. ix, Hft. 3).—The diseases which come under this category are distinctly the purulent ones; however, this does not include those of specific origin, such as tuberculosis and syphilis, since the mere opening and draining of one of these focii in the lung has no more effect than it would have in any other part of the body. A distinction must be drawn between purulent disease of the mucous membranes (bronchiectasis) and the same of the parenchyma, the latter being capable of localization, and hence amenable to surgical treatment. Lung surgery has been of slow development for several reasons: the number of focii is hard to determine, exact localization is difficult, bronchial drainage often solves the problem while the operator is debating. There are two chief considerations involved in the treatment of an abscess: (1) the emptying of the pus, (2) the obliteration of the cavity by scar tissue. This latter feature of the matter is different in the lung from what it is in any other tissue. Here the walls of a cavity cannot always be made to collapse, because

the elasticity of the tissue causes the granulating surfaces to be drawn toward the periphery of the organ, especially if the two pleural layers be adherent. In this very particular there exists a vast difference in the upper and lower lobes; in the former the tissues surrounding the lung are exceedingly resistant, while below, the diaphragm and long ribs are capable of considerable movement; hence, a cavity can, in many instances, be obliterated. As to drainage through the bronchii, the opposite holds good; by position the upper portion of a lung is better drained. Hence, the operative indications are different, according to the location of the abscess; if it be in the lower lobe, it is often sufficient to drain it, while in the upper, the principal consideration is to so mobilize the tissues surrounding the cavity that they can collapse, and allow it to heal through granulation. Elastic tissue in the sputum indicates that a cavity is forming progressively, but, on the other hand, the classical symptoms of cavity formation obtain only in the upper lobe, for the reason that cavities so situated are the only ones held well open in the way indicated. Auscultation and the "X-ray" are our best guides to a diagnosis in all these cases. We are more likely to meet with pleural adhesions in an acute than in a chronic case, and indeed it may be said in general that the prognosis in all acute cases is better than in the chronic, for the latter are so often complicated. Tuberculous cavities have no place in the consideration of this subject.

Epitheliomatous Degeneration of Old Osteomyelitic Focii.—BAUBY (*Archives Provinciales de Chirurgie*, Tome xi, No. 2).—Four of these interesting cases have come under the author's observation recently. In the first there was spontaneous fracture of the tibia, the site of the disease, but after exarticulation at the knee the patient recovered and was cured. Another patient who suffered a spontaneous fracture of the same bone, succumbed to a general carcinomatosis. The third was saved by a timely amputation at the knee. In the last case, a resection of the humerus, the conservatism of the surgeon was rewarded by a recurrence at the site. From the literature the author was able to collect but forty-nine of this kind of cases; still he considers, and correctly so, that they must be much more common than this statement would lead one to believe. In most instances the growth was superficial, and only at a late date invaded the depths of the bone. As so much scar tissue must be invaded, the progress of such a growth is necessarily slow and the prognosis, in consequence, is good. As regards diagnosis, it may be said that one is to regard with suspicion any old focus which, in an aged person, takes on an angry aspect after any injury; but the size attained, pain, spontaneous fracture, and the odor will generally determine the matter before the microscope is used.

Operable Brain Tumors.—v. BERGMANN (*Archiv fuer Klinische Chirurgie*, Bd. lxx, Hft. 4).—This famous surgeon relates his experiences in this field for the two years 1900 and 1901. He commences by saying that the only growths which are really to be considered as operable are those which involve the motor area. In all the others there must exist an uncertainty, and the surgical treatment of them must be fraught with many unpleasant surprises for the surgeon. The first case of solid tumor related is one of a sarcoma which the author was able to so completely remove as to permanently cure the patient. Following this come the histories of three more which terminated fatally, though the diagnosis had been correctly made. The exactness with which all the histories are detailed is wonderful; and from the standpoint of diagnosis particularly this is an interesting and instructive article. The subject of operating at two sittings is discussed, and while the author has not made it a rule, still he admits that there are many cases in which the condition of the patient at the time of operation may make a fatal result less likely if the surgeon only exposes the dura at the first sitting, and defers the ablation of the tumor until the patient has had a few

days in which to recruit and recover from the primary hemorrhage. The operation is justly dreaded since twenty-five per cent. of all these patients die in consequence of it. Once v. Bergmann cut right into an angioma, and has repeatedly opened cysts which proved to be part of sarcomata.

The Technique of Amputations.—COWAN (*International Journal of Surgery*, May, 1902).—In his preliminary to a series of articles, the author avers that the first question to claim the surgeon's attention, after injury to an extremity should be, how to avoid amputation. However, conservatism may in some cases be a misnomer, as the following illustrates: A contusion to the thigh which did not tear the skin, ruptured the femoral artery and the consequent hemorrhage into the tissues compressed the collateral vessels so much that gangrene ensued, when incision and ligation of the femoral might have saved the leg. The two prime considerations in saving an extremity are the condition of the circulation, and the likelihood of its function being preserved.

Embolism of the Pulmonary Arteries Following Injuries and Surgical Operations.—LOTHEISSEN (*Beitraege zur Klinischen Chirurgie*, Bd. xxxii, Hft. 3).—Five such cases are reported from the author's actual experience, together with 61 which he has gathered from the literature. Of these 55 ended fatally. The causes were as follows: fracture 36, contusion 6, tendon or muscle tearing 4, surgical operations 20. Of these latter it may be said that frequently no connection can be traced between the operation and the fatal complication now under discussion. The cause of the thrombosis which results in embolism lies in a disposition of the blood to clotting; and this is often the result of anemia and of certain diseases like cholera which disturb the normal composition of the blood. At the same time slowing of the current from cardiac causes may result in the same thing. Then, on the other hand, changes in the vessel wall, as a result of fractures or other injuries and diseases, are prone to lead to thrombosis. Movements of a sudden or violent nature, during convalescence, may cause part of a thrombus to be torn loose, or massage may accomplish the same undesirable result. It is worthy of note that most of these troubles arise in the lower extremity. The principal symptom is a sudden, profound dyspnea, which can simulate but one thing, viz., closure of a coronary artery; but in the latter case the patient will give a history of similar attacks. The treatment is first prophylactic, as will be understood from the above. Camphor may do some good, and morphine is of value after an attack, it superinducing the quiet so essential to a proper distribution of blood to the vital organs.

Posterior Gastro-Enterostomy.—TARRIER (*Revue de Chirurgie*, No. 4, 1902).—The technique is first described, and differs in no particular from that practiced by most of those who believe in two rows of continued sutures. The author states that it usually requires about one hour for him to perform the operation. His results leave but little to be desired, in view of the fact that of his last twenty-two patients operated upon but one died. And this seems all the more remarkable when we consider that eight of these individuals were afflicted with cancer. The dreaded "circulus vitiosus" was not observed, and the author claims that it can be the result of faulty technique alone. Great stress is laid by him upon the proper treatment of the patient before and after the operation. Lavage is indispensable in dilatation, and must be done at least once just before the operation in every case. In addition, he gives his patient a large saline infusion while on the table, but never uses cathartics before the operation, since the patient is sickened and weakened thereby. The post-operative treatment consists principally in proper care of the digestive tract; lavage is practiced if there are gastric symptoms, though in this the author does not go as far as do

Lindner and many other surgeons, who wash every case on the evening following the operation, to remove blood clots and gastric accumulations. A rectal tube is inserted to relieve gaseous distension, and the bowels are moved by an enema in a few days.

Carcinoma and Skin Changes.—HOLLAENDER (*Centralblatt fuer Chirurgie*, April 26, 1902).—What the author has to say of the skin changes which accompany or follow cancer, applies to all cancers so deeply seated that they cannot be felt, and particularly to intestinal growths. At such a time one is apt to find scattered over the otherwise healthy skin a multitude of elevated red spots varying in size from a pin-head to a pea. They do not disappear on pressure and their nature has been determined to be that of capillary aneurisms or small hemorrhages, according to Hollaender. (The author's pathological anatomy is not quite clear.) This phenomenon is valuable only when the spots appear suddenly and in great numbers. Warts and pigmentation seem also to betoken cancer under certain circumstances; particularly is this true when the warts are extensive and when the pigmentation is in the vicinity of the lesion which is suspected to be malignant.

Intestinal Suture.—MACLAREN (*Annals of Surgery*, May, 1902).—Five cases were treated by different suture methods and the results are compared in an interesting way. In the first case Lembert sutures were introduced over the O'Hara clamp with good results. A second gut was united end-to-end by a double silk continuous suture, and the patient made a satisfactory recovery. In the third case the intestine was merely sewn longitudinally over a fistula. In the next patient the Connell end-to-end suture followed a resection, and the author describes the appearance of the bowel as being the best of his experience. This patient recovered. Case No. 5 was a gastro-enterostomy with the Connell suture, and the writer seems as well pleased as he did with its use in the instance last mentioned.

The Observation on the Human Subject of a Thiry Fistula.—NAGANO (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, Bd. ix, Hft. 3).—The patient was one in who v. Mikulicz had commenced the treatment of extrophy of the bladder, by "exclusion" of a portion of the small intestine, the same having been closed at one end and the other left open on the abdominal wound. The fistula thus produced furnished the author the field for his studies. This "excluded" portion of the intestine was found to move but little at 5 o'clock in the morning, but in the afternoon it was very active. A small ball thrust into it for any distance up to 3.5 cm. was expelled at once by the contraction of the abdominal muscles; but when introduced beyond the depth mentioned, the ball was drawn further in until pain was felt when it impinged upon the closed end of the gut. A rod introduced, was caused to rotate; and this movement was increased by heat and slowed by cold. The temperature in the gut was always higher than in the patient's axilla. There was much more secretion during the day than at night, and the same was always alkaline. Albumines and fats were not acted upon by the secretion, and starch but slightly. After the introduction of cane sugar, diastase and maltose were found in the gut. Iodide of potassium, common salt and water were freely absorbed; as were cane sugar, maltose and milk sugar without the action of any ferment. Thus it will be seen that the intestine of the dog and that of the human behave in the same manner as regards secretion and absorption.

Subluxation of the Inferior Maxilla for the Prevention of Chloroform Syncope.—VALERY (*Gazette des Hopitaux*, No. 49, 1902).—The author does not exert simple continued traction upon the maxilla, as is common in our clinics, but does this rhythmically between the periods at which he allows the drops of chloroform

to fall upon the mask. For his method he claims the advantage that regular inspiration is excited, and further that the mucus is thus much better drained away.

The Gasserian Ganglion Operation.—LEXER (*Archiv fuer klinische Chirurgie*, Bd. ixv, Hft. 4).—The author bases his report upon the result of fifteen extirpations of the ganglion, done after the method of Krause. The remarkable success which has crowned his efforts cannot be better shown than by the fact that he lost but one of his patients. This was an old woman who died four days after the procedure, of meningitis; at the autopsy there developed the interesting circumstance that a brain tumor had caused all the trouble. The author takes occasion to remark in this connection, that the disease can always be regarded as central where, after removal of the ganglion with the clinical consequences of the same, pain persists nevertheless. The prognosis in hysterical tri-facial neuralgia is not improved by an operation, hence one must select his cases with the utmost care. In his technique Lexer no longer makes an osteoplastic flap while following the general idea of Krause; he constructs a smaller round bone opening, and has enlarged the same downward into the foramen ovale, in a number of instances. In this way the temporal lobe is not so exposed to the dangerous pressure of the spatula, as in cases where the high opening is used. Lexer always ligates the middle meningeal double and sits the patient up if hemorrhage becomes alarming. In one case pain has returned on the operated side, while in two it has come back on the opposite side.

A New Coupler for Rapid Intestinal Anastomosis.—KANE (*Journal of the American Medical Association*, April 19, 1902).—This is a simple and ingenuous device for uniting the gut end-to-end without the introduction of a suture. The end of each segment is tied over a hollow cylinder and then the two cylinders are drawn together by a thread over another cylinder, and the anastomosis is complete. The apparatus is made of aluminum, so is light, and from the inventor's description, would seem to be very easy of application. It has been tried once on the living, the patient dying three days later of other causes, but no fatality occurred following its use upon several animals!

The Technique of the Resection of the Prolapsed Rectum.—HENLE (*Beitraege zur klinischen Chirurgie*, Bd. xxxii, Hft. 3).—The author refers in no very complimentary manner to the work of his superior, v. Mikulicz, during the past ten years, saying that the six cases of the latter resulted in three perfect results, and three others which were wholly unsatisfactory, one of the latter patients dying as a consequence of the operation. The main fault of the great Breslau surgeon seems to have been that he pulled down too much, thus incurring too great a tension on his sutures, and so retraction. The author's technique consists in a circular incision at the skin margin of the anus, after which the peritoneum is opened, prolapsed coils of intestines pushed up, and the mesocolon ligated, thus allowing the rectum to be straightened out and completely pulled down. The skin is now sutured to the serosa of the gut, either completely, or else tampons are inserted between the sutures; the former method seems to find favor in the author's eyes. The redundant gut is now amputated transversely and the stump sewn over a large ring, or else a glass tube is inserted into the rectum and a heavy ligature bound around the gut. However, this latter idea cannot be recommended, since solid feces are likely to clog the tube and force it out too soon. The wound is dressed by wrapping iodoform gauze around the protrusion and thus infection, with consequent pulling out of stitches, and retraction, prevented.

A Case of Death Following Nephrectomy.—POUSSON (*Bulletins et mémoires de la Société de Chirurgie de Paris* Tome xxviii, No. 12.)—In the surgery of the kidney, we are better informed of the exact organic result than can be the case in the treatment of any other viscus. However, the very diagnostic methods at our command create what may prove to be a false security in certain cases. In this instance, a unilateral nephrolithiasis was diagnosed, found and the diseased organ removed; when, to the author's surprise, the patient, who had eliminated a good quantity of urine during the first twenty-four hours, suddenly ceased to do so and died fifty hours after the procedure. At the autopsy the other kidney was seen to be acutely diseased, a condition which the urinalysis had not revealed if it were present before the operation.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

The Prevention of Sea-Sickness by Means of Orexin Tannate.—C. V. WILD (*Archiv f. Schiff's.-und Tropen.-Hygiene*, vol. vi, p. 24; *Die Heilkunde*, 1902, p. 165).—The author administers orexin tannate for the prevention of sea-sickness as follows: 0.5 g. (gr. viii) are taken in 250 c. c. fluid (such as milk, tea, bouillon) three hours before the ship sails, and two hours later a plentiful meal is to be taken. His observations have brought him to the following conclusions:

1. That people usually subject to sea-sickness are free from illness at least for several days, if the drug is taken in exactly the manner described above;
2. That the illness is not prevented where the drug is taken in any other manner;
3. That in one case, while the drug prevented illness on the day of sailing, sea-sickness set in on the following day. He ascribes this ill result to the fact that in this case the meal taken two hours after the administration of the orexin tannate was insufficient.

Dionin in Diseases of the Respiratory Tract.—AUG. SCHERER (*Centralbl. f. d. ges. Ther.*, 1902, p. 283).—The chief effect of the administration of dionin consists in its action as a respiratory sedative. The dose is 0.02–0.03 g. (gr. $\frac{1}{3}$ – $\frac{1}{2}$) two to four times daily. The cough often disappears in four or five days, without the use of any other narcotic. It has several advantages over morphine—a dionin habit is never formed; it is rarely necessary to increase the dose, even after prolonged use; the expectoration is not diminished or made difficult, as is so often the case after the use of morphine. Patients who complain of insomnia on account of their cough often sleep well after the administration of gr. $\frac{1}{3}$ of dionin, without having headache or other ill after-effects on awakening. Sometimes, however, the drug fails to act; in such cases an increase of the dose does not lead to greater efficiency, and another sedative must be used. The pain of dysmenorrhea is often relieved by dionin; the same is true of headache. The author failed to obtain a beneficial action of the drug in cases of painful deglutition due to laryngeal tuberculosis. In brief, dionin, while it occasionally leaves us in the lurch, is a valuable addition to our armamentarium.

A Preliminary Note on the "Silver Treatment" of Phthisis by Intravenous Injections of Protargol.—W. EWART (*The Lancet*, 1902, No. 5).—The use of protargol in phthisis was suggested to the writer by Mays's successful use of silver nitrate injections in this disease. His results were decidedly better than

those of Mays, and at least as good as those obtained by Maguire by means of formaldehyde. There was always a noticeable subjective improvement which went hand in hand with a decided improvement in appearance and strength. The cough and expectoration diminished and the sputum, losing its characteristic tuberculous appearance, became more and more catarrhal in appearance and finally consisted merely of transparent mucus. The end result of the treatment was always characterized by a reduction of temperature, although this fall was often interrupted by febrile exacerbations in the course of the treatment.

The technique is as follows: About 3 iss of normal salt solution containing gr. iss to gr. iiss of protargol are injected into a vein, followed by the injection through the same needle of some more salt solution to prevent injury to the tissues. An hour after the injection a chill usually ensues, followed by a rapid rise of temperature lasting half an hour. After this has disappeared the patient feels permanently better; no long-continued ill after-effects were ever noted. Only in one case was the injection followed by a brief nephritis. In another case, on the other hand, an albuminuria of long standing was markedly ameliorated, while in a third case an obstinate hemoptysis ceased after the first injection. Twelve to fifteen injections usually suffice. They are best given every other day, though in some cases they were given daily.

As soon as the beneficial effects begin to show themselves, other therapeutic measures should be used. Of these the most valuable are general massage, moderate exercise (especially respiratory gymnastics), overfeeding and care of the skin. As a result of this combined treatment, patients who had entered the hospital in a very bad condition, could be discharged after a few weeks very much improved and in good condition to begin the fresh air treatment. After a short stay in the country, they returned home greatly benefited and with good prospects of a permanent cure.

Adrenalin in Internal Medicine.—A. L. BENEDICT (*Therap. Monatsh.*, 1902, No. 4).—The value of suprarenal extract as a cardiac tonic and as a vaso-constrictor in cases of general relaxation of the vascular system, associated with constipation, dyspepsia, and gastroptosis, is generally conceded. The writer has found that all the valuable properties of suprarenal extract when administered internally reside also in its active principle, adrenalin. He uses a one per cent. watery solution, one drop at a dose, so that only grain 1-100 is taken at a time. Of the 1-1000 solution used in this country ten drops would be the dose. The therapeutic effect soon becomes evident in a strengthening of the pulse. If, as usually happens after the drug has been used two weeks, the pulse becomes hard, the treatment must be discontinued for a week or two. For theoretical reasons (lest the constriction of the gastric vessels interfere with digestion) he gives the adrenalin several hours after meals; in cases, however, in which he deviated from this rule he failed to notice any unfavorable influence upon digestion. In one case of frequently repeated hemorrhage from a gastric ulcer, the beneficial effect of adrenalin was prompt.

Carbonate of Creosote in Pneumonia.—W. H. THOMSON (*New England Med. Monthly*, 1902, No. 5).—In the *Medical Record* of November 2, 1901, Dr. Leonard Weber reports nine cases of pneumonia treated by creosotal, or the carbonate of creosote, with one death. Dr. Thomson now reports eighteen cases treated by the same drug, also with one death. Of these, fifteen were males and three females; their ages ranged from ten years to forty-five. Both lungs were involved in three patients, all of whom recovered, while of the remainder, six had the right lung attacked and nine the left. The patient that died was an alcoholic, though not immoderately so. The usual formula for administering the drug was;

℞	Creosot. carbonat	5	iv
	Glycerini	3	j
	Aq. mentha	ad	℥ ss
M.	Dose.—Tablespoonful in water every two hours if awake.		

For the histories of the cases, which are not without interest, the reader must be referred to the original article.

“Why Does Brain Syphilis Seem to Resist Treatment?”—O. ZIEMSEN (*Berl. Klin. Wochenschr.*, 1901, No. 18).—The above question is answered by Ziemssen by the assertion that many physicians neglect to treat brain syphilis sufficiently energetically, owing to the belief that the excessive administration of mercury is apt to increase or even produce nervous lesions. This he denies most emphatically. A second explanation, according to Ziemssen, lies in the difficulty of diagnosing brain syphilis in its early stages. This is the more so since experience shows that it is just in cases with slight and indefinite primary and secondary lesions that we are most apt to meet with this complication. Such cases are usually not thoroughly treated, and he advises very energetic procedures on even the slightest manifestation of cerebral involvement. In the third place, physicians are often discouraged by the failure of the specific treatment in brain syphilis, since the symptoms often grow more severe during the course of the treatment. The explanation of this observation lies in the fact that the absorption of a gumma, a sclerosis, or even an endarteritis, produces a disturbance of the pressure equilibrium of the cerebral circulation. When, however, the resorption is complete, this circulatory equilibrium quickly readjusts itself. The essential feature of a successful treatment of brain syphilis, according to Ziemssen, is a mercurial course as intense and as prolonged as possible, accompanied by the simultaneous administration of iodide of potash in large doses. The inunction method alone permits the use of maximal doses of mercury without risk to the patient.

Aphrodisiac Formule.—(*Centralbl. f. d. ges. Therap.*, 1902, p. 318.)—The following formule have been found useful for stimulating sexual desire:

1. ℞ Cornutin. citrie 0.15
Argill. alb 7.0
Mucil. gum. tragacanth q. s.
M. et f. pilul. No. x. D. S.—One pill twice daily.
2. ℞ Mentholi 0.1
Extr. cimicifug fl 25.0
M. D. S.—Twenty drops three times daily.
3. ℞ Aur. chlorat 0.5
Aq. dest ad 20.0
Dtr. ad vitr. nigr.
M. D. S.—Twenty drops three times daily, increasing the dose until fifty drops are taken three times daily.
4. ℞ Extr. fl. staphysagrie 7.5
Extr. damian 30.0
Aq. dest 150.0
M. D. S.—One tablespoonful three times daily.
5. ℞ Caryophyll.,
Croc. orient.,
Zingiberis aa 4.0
Moschi,
Ambr. gris aa 0.4
M. f. p. Div. in dos. æq. No. xii. D. S.—One powder morning and evening.
6. ℞ Extr. muir. puam fl 15.0
D. S.—Twenty drops three times daily.

7. **R** Strychnin. nitr.,
 Phosphori.....aa 0.015
 Extr. cannab. ind.....0.12
 Limatur, ferr.....2.0
 Rad. rhei chin.....0.4
 Extr. quassiæ.....q s.
 M. et f. pilul. No. xxx. D. S.—One pill three times daily before meals.
8. **R** Johimbini.....0.005
 Sacchari.....0.90
 M. f. p. Dtr. tal. dos. No. xii. D. S.—Three times daily one powder.
9. **R** Zinc. phosphoric,
 Extr. nucis vomic.....aa 0.3
 Extr. quass.,
 Extr. liqurit.....aa q. s.
 M. et f. pilul. No. xx. D. S.—One pill three times daily.
10. **R** Rad. panac. ginseng.....1.0
 Fruct. vanill.....2.0
 Tr. ambr.....gtt. 1
 Sacchari.....30.0
 Mucil. gum. acac.....q. s.
 M. et f. pastill. No. lx. D. S.—Take two or three pastilles three times daily.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

Tetanus and Vaccination—An Analytical Study of Ninety-Five Cases of This Rare Complication.—JOS. MCFARLAND (*The Journal of Medical Research*, May, 1902).—McFarland collects ninety-five cases of tetanus complicating vaccination and endeavors to show that this untoward accident is a result of contaminated vaccine virus. He denies that there is any great chance of tetanus occurring from accidental entrance of tetanus bacilli into a vaccination wound; that the occurrence of this complication depends upon a local prevalence of the tetanus bacillus, as was claimed in the Camden, New Jersey, epidemic, and that the use of a shield as a protection to the vaccination wound has anything to do with the production of the tetanus infection in the reported cases is also denied by him. He gives a tabulated picture of forty cases of tetanus complicating vaccination, designating the brands of virus used by letters, not by the names of the manufacturing companies. He shows that tetanus occurred thirty times in the case of the virus made by the firm "E," and only ten times in the cases of all the other brands, numbering six. Hence he concludes that the infection was contained in the vaccine virus "E." He admits, however, that the brand "E" was probably used millions of times without the occurrence of tetanus, for this was a popular make of virus in this country.

He concludes that while tetanus has been looked upon as a rare complication of vaccination, the number of cases recently reported is out of all proportion to what has been observed heretofore. The cases are chiefly American and occur scattered throughout the eastern United States and Canada. They have nothing to do with atmospheric, telluric or seasonal conditions. Although they occur in small numbers after the use of various viruses, an overwhelming proportion has occurred after the use of a particular virus. The tetanus bacillus may be present in the virus in small numbers, being derived from the manure and hay. Occasionally the number of bacilli becomes greater than usual through carelessness or accident. The future avoidance of the complication is to be sought for in greater care in the preparation of the vaccine virus.

On Adrenalin Glycosuria and Allied Forms of Glycosuria.—C. A. HERTER (*The Medical News*, May 10, 1902).—Intravenous injections of adrenalin produce glycosuria, as do subcutaneous injections. A rise in blood pressure sometimes accompanies the glycosuria. In moderate size dogs, a dose of from 4 to 6 c. c. of adrenalin will always produce glycosuria. Usually from 3 to 6 per cent. of sugar appears in the urine within the hour after injection. No glycosuria is produced by administration per oram. The glycosuria after a moderate intraperitoneal dose of adrenalin lasts somewhat less than twenty-four hours. Owing to the fact that the high percentage of sugar first observed after the injection is not steadily maintained, the total amount excreted is inconsiderable. It is probable, though not certain, that the form of sugar excreted in this adrenalin glycosuria is glucose, being dextro-rotatory and producing a glucosazon without difficulty.

Numerous observations on the sugar count of the blood before and after the production of adrenalin glycosuria indicate that in well-fed animals there is regularly an increase in the blood sugar. In general it can be said that the largest quantities of sugar have been observed in well-nourished dogs that had been recently fed. Observations were made in regard to the effects of repeated injections of adrenalin in four dogs, of which only three were normal, the fourth having had the spleen and one-half the pancreas removed at previous operations. Injections were made every third day, with gradually increasing doses. The usual symptoms abated and less sugar was excreted later on than at the beginning of the experiments. In the splenectomized dog, sugar failed to appear in the urine after the last three injections. It seems, then, that a condition of gradual tolerance is acquired by these dogs. Such a tolerance has been observed with morphine, and it depends, apparently, on an increased oxidizing activity on the part of the cells.

These dogs show the following symptoms after injection: First, vomiting after a few minutes; then, after half hour, comes a period of intense excitement and restlessness, lasting about an hour. This is followed by a period of prostration, and on the day following the injection there is loss of appetite. After fatal doses (10 c. c. in a dog of from 5 to 8 kilos) the symptoms are similar, but more intense.

The application of adrenalin to the surface of the pancreas in dogs produced a quick glycosuria. It was plainly shown that the local application of adrenalin to the pancreas is distinctly more effective in causing glycosuria than is its contact with the liver, spleen or brain.

The Bacteriology of Erysipelas.—G. E. PFAHLER (*The Phila. Med. Journal*, April 19, 1902).—The writer claims to have found a "brand new" organism that is specific for erysipelatos infections. He writes that he has found a diplococcus in pure culture in sixty-six cases out of ninety-eight studied.

Skin cultures were made in the routine way. The writer states that in the majority of cases some kind of an antiseptic had been applied to the site of infection prior to taking material for inoculation work. He nicely explains his consecutive finding of the diplococcus in so many cases in pure culture by reason of this fact, *i. e.*, that the antiseptic killed off all the other skin organisms, leaving only the "diplococcus" which, shall we say, will "be nameless nevermore or evermore?" Erysipelatos manifestations were produced in rabbits by subcutaneous inoculations with this diplococcus.

What more can we wish to prove that this "diplococcus" is the real cause of erysipelas? This investigator would ruthlessly batter down our preconceived conviction that the streptococcus erysipelatis Fehleisenii is the agent in these cases. Shall we have this conviction battered down and cast aside? Conservatism prompts us to say no, and to gently remind the above investigator that the streptococcus referred to has been found in erysipelatos infections repeatedly

and has been found to be capable of reproducing erysipelatous lesions so often that we would fain have additional proof that this "diplococcus" is constantly present in erysipelas before we accept it as the new etiologic agent for this disease. Might not the investigator's argument concerning the use of the antiseptic explain why he did not get a culture of the streptococcus erysipelatis, *e. g.*, that the diplococcus survived the antiseptic treatment while the real agent of the disease was destroyed by it. And again, we must take into consideration the fact that this diplococcus might be a streptococcus "in disguise."

Value of the Justus Test, with Report of Cases.—HENRY TUCKER (*The Phila. Med. Journal*, May 10, 1902).—This test, first described by Dr. Jacob Justus, an assistant in Schwimmer's clinic at Buda-Pest, is based upon the fact that mercury given either by subcutaneous or intravenous injection, or by inunction, will cause a diminution in the hemoglobin of the blood. In the healthy or non-syphilitic individual nature rapidly replaces this loss, but in syphilitics the loss will not be immediately compensated, so that an examination made twenty-four hours after giving the drug will show a fall of from 10 to 20 per cent. in the hemoglobin.

Tucker examined twenty-seven cases of mixed venereal diseases, syphilitic ulcers, chaneroid, herpes, tuberculosis, and pustulo-crustaceous syphilide, with the following results: He found that the reaction occurred as well with non-syphilitic individuals as with the truly syphilitic; that in the very condition which most resembled a syphilitic ulcer, *i. e.*, the chaneroidal ulcer, we get the Justus reaction; hence, he concludes that the Justus test has no practical value.

The Justus Test for Syphilis, with Report of Cases.—WM. E. HUGER (*The Phila. Med. Journal*, May 10, 1902).—Huger gives the results of the application of the Justus blood test to a number of cases, syphilis, chaneroidal ulcers; he found that there are enough negative results in the cases of chaneres to show that the test is wholly unreliable, and moreover, one positive result among the chaneroidal cases detracts still more from the possible value of the reaction.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Extraordinary Case of Trauma in a Pregnant Woman.—M. J. SCHUH (*Philad. Med. Jour.*, May 3, 1902).—A woman, twenty-nine years of age, four months pregnant, fell five stories out of a window. When picked up she was found in a sitting position. She was in a comatose condition. Patient recovered from the first shock in less than twenty-four hours, and then complained of pain in the left side in the region of the left kidney. The urine contained a very large quantity of blood. Temperature was 90°, pulse 130. Twenty-four hours later the pulse was about 100. An exploratory laparotomy was refrained from on account of her pulse and general condition improving. On the fourth day there was no more blood found in the urine and temperature and pulse were normal. She made a prompt recovery. Five and a half months after the accident she gave birth to a living child.

Fracture of the Base of the Skull in a Woman Seven Months Pregnant—Delivery at Full Term.—VARNIER (*Compt. rend. de la soc. d'obstr., de gyn. et de ped.*,

Paris, June, 1900; *rev. Centralbl. fuer Chirurgie*, No. 47, 1900).—Varnier reports the case of a woman, eighteen years of age, seven months pregnant, who jumped from a third-story window to the street. She was found unconscious, with a hemorrhage from the left ear, nose and mouth. Two days later the left nervus abducens became paralyzed. Eight days after the accident consciousness returned. During all this time there were no abnormal symptoms on the part of the uterus observed. The fetal heart-beatings remained normal. Patient left the bed four weeks afterwards. She was later delivered of a full-term child. The author concludes his paper with a review of the literature. A similar case was reported by Carstens. There are two cases of fracture of the skull in pregnant women on record in which trepanation was performed. In both cases the pregnancy took a normal course.

Cesarean Section in a Case of Multiple Incised Wounds in the Uterus.—S. A. MIKONOFF (*Wratch*, December 22, 1901; *rev. Phila. Med. Jour.*, March 8, 1902).—The author reports the case of a girl, sixteen years old, who was received at the hospital in an unconscious state, with eleven incised wounds. Two of them penetrated the lung and three the abdominal wall. The largest wound of the abdomen was twelve cm. long and on the median line below the umbilicus. Through it protruded the wounded pregnant uterus, and through the latter the shoulder of the child. Through another wound above the anterior superior spine of the ileum protruded several loops of the small intestines, and between them the arm of the child. The intestines were scattered on the extremely dirty shirt. A cesarean section was performed at once and the wounds closed. The operation lasted two hours, during which time 1000 grams of physiologic salt solution were injected. The girl made an uninterrupted recovery save a pleurisy which lasted eight days and was accompanied by a slight elevation of temperature. The case illustrates what may be accomplished by timely surgical aid even in apparently hopeless cases.

Gunshot Wounds of the Pregnant Uterus.—G. GELLHORN (*St. Louis Med. Review*, November 7 and 9, 1901).—The author was able to collect from literature the reports of seventeen authentic cases of gunshot wounds of the pregnant uterus, the histories of all of which he gives in brief. Based upon a study of the pathological findings, the symptoms, the treatment resorted to and the final outcome, the writer draws some interesting conclusions in regard to the pathology, symptomatology, diagnosis, prognosis and treatment of these injuries. For treatment, the rule is laid down that in every case of gunshot wound of the pregnant uterus cesarean section should be performed at once.

The Traumatism of Pregnancy.—DENSLOW LEWIS (*Med. Rec.*, April 12, 1902).—The consideration of the traumatism of pregnancy divides itself into a consideration of those injuries which are due to attempts at an interruption of the pregnancy and a consideration of injuries which occur incidentally, often by accident. Both kinds of injuries are illustrated by the writer with a large number of interesting, sometimes unique histories of cases compiled from literature. Regarding the attempt of criminal abortion, it is a remarkable fact that, in spite of serious injuries, the fecundated ovum may cling to its attachment with great tenacity. In other cases of this sort seemingly trivial procedures suffice, sometimes weeks afterwards, to cause an interruption of the pregnancy. The greatest danger in criminal abortion results from infection. As regards treatment of these cases, the author brings forth the following conclusions: Only in rare instances where the fetal envelope is not injured and the condition of the patient is good, the case may be let alone. If the evidence of serious traumatism is plainly manifest, active measures have to be resorted to. If it is probable that the foreign body used for bringing forth abortion is retained in the

uterus or if the abortion is an incomplete one, the uterus has to be emptied at once. The writer opposes the use of the vaginal or intrauterine douche, and recommends strongly packing the uterus with gauze, after Duehrssen. If the foreign body has escaped into the peritoneal cavity, laparotomy must be performed at once. In certain cases of mutilation or ulceration or infection, hysterectomy may be justified.

The traumatisms of pregnancy due to direct or indirect violence occur from falls, beating, lifting, jumping, crushing, kicks, or they are the result of injuries due to gunshots, knife, pitchfork, nail or cattle-horn. In cases of this kind, in which the patient is first seen several days after the accident, peritoneal surfaces may have become agglutinated, effusion may have subsided and a watchful expectancy may be sufficient; altogether the interests of the patients, however, are better conserved by an immediate abdominal incision than by trusting to chance. Sequelæ of a serious character, such as hemorrhage, intestinal rupture, infection, etc., may occur within the abdominal cavity without manifesting themselves by pathognomonic symptoms until too late. Even if the serious internal injury which is sought for at the operation is not found, it cannot be said that an abdominal section, as performed to-day, would have added materially to the risk. At the operation the extent of the traumatism should be accurately determined. Conservative cesarean section will have to be performed in many cases. In some instances, however, the Porro operation will be preferable.

Extrauterine Pregnancy After Treatment for Sterility.—W. GILL WYLIE (Woman's Hospital Society, New York, meeting January 28, 1902).—The speaker reported four cases of ectopic pregnancy following treatment with the intrauterine hard-rubber drainage tube. He is inclined to see no causal connection between treatment and the pathological condition of the subsequent pregnancy.

Deciduoma Malignum—A Clinical Review.—LOUIS J. LADINSKY (*Am. Journ. of Obstetr.*, April, 1902).—In this elaborate paper the author gives the detailed report of a case of deciduoma malignum observed by him. Based upon a careful study of the so far recorded one hundred and thirty-two cases, the histories of which are given in brief, he concludes his essay with a consideration of the etiology, symptomatology, diagnosis and treatment of this disease. The clinical features which in the author's opinion aid in arriving at a diagnosis are summarized as follows: 1. History of recent parturition or abortion, especially if a hydatid mole has been discharged or placenta retained. 2. Profuse hemorrhage occurring at irregular intervals without apparent cause and not amenable to the ordinary means of treatment, and which recur in spite of repeated curetage; the presence of a constant sanguineous discharge during the intervals of hemorrhage. 3. A persistently large and hypertrophic uterus and cervix, with patulous os. 4. Pain in the pelvis. 5. Anemia, rapid loss of flesh and strength and cachexia. 6. Characteristic nodule in interior of uterus in the early stages. 7. The presence of metastatic deposits, especially in the vagina and lungs, the latter producing cough and bloody expectoration.

The prognosis is the most fatal of all malignant neoplasms of the uterus, because of its very rapid development and exceeding proneness to early metastases and recurrence.

The only feasible treatment is complete extirpation of the uterus and vaginal metastasis, if present, as soon as the diagnosis is made. The author states that he agrees with Neumann, of Vienna, that as a preventive measure the uterus should be extirpated in every case in which a microscopical examination of the cysts of a discharged hydatid mole shows an atypical proliferation of the cells, or scrapings from the uterus exhibit the slightest indication of malignant degeneration. [The reader will find a more detailed consideration of Dr. Neumann's opinion in this matter in an original article by him printed at another place in this issue.—ED.]

ORTHOPEDICS.

IN CHARGE OF

MALVERN B. CLOPTON, M. D.

Deformities Due to Muscular Paralysis; Methods of Production; Possibilities in Tendon Transplantation; Combinations that Have Been Made to Correct Deformity.—WISNER R. TOWNSEND, M. D. (*N. Y. Med. Jour.*, vol. lxxv, No. 18).—The production of the deformity is due to several causes: 1. Gravity is the primary and important factor in producing many deformities. 2. The action of the non-paralyzed muscles. 3. The arrested development and growth of all the tissues in proximity to the paralyzed muscles. 4. The results of weight applied to weakened structures. 5. All other causes, such as faulty braces, imperfect operations, and diseases producing muscular and bony changes. In the endeavor to correct these deformities by tendon transplantation we may attempt to improve either position or function, or both. A paralyzed muscle may be attached to periosteum or bone or muscle or ligament, and used to hold the foot in corrected position, without any hope of function; but non-paralyzed muscles must be used if we desire functional return. In the lower extremity, where opportunity is more frequently given to transplant tendons, the weight of the body is a factor that has not been sufficiently considered in most cases, and for a long time after operation apparatus should be used to prevent recurrence of the deformity. The subsequent development of the muscles and tendons has not been properly looked after in many instances, as muscles that have been inactive for years need long and careful treatment if they are to be expected to perform active movements; also the relative strength of the muscles must be taken into consideration. The ordinary laws of mechanics cannot be defied, and the manner in which the muscles act to perform their work must be studied. Artheodesis is a valuable adjunct in correcting deformities due to paralysis.

The author gives a full list of the operations which have been done, with the variations of tendon transfer for the various conditions. The lower leg offers the largest field, and many combinations have been used; but the knee, where the sartorius is the only remaining muscle of the anterior group, the shoulder, the forearm, elbow and wrist have been successfully treated. A more recent departure has been the suturing of the tendon of the healthy muscle directly to the bone or periosteum where the power is needed, this giving great security, with no atrophied tissues used. The contracted tendons are also advantageously lengthened instead of completely severing them with a tenotomy, when these structures are intended to take on their original function immediately. The most important of the numerous articles on this subject are abstracted by the author.

Operation for the Relief of Paralytic Deformities, with Special Reference to Tendon Transplantation.—ROYAL WHITMAN (*N. Y. Med. Jour.*, vol. lxxv, No. 18).—As in 80 per cent. of this class of cases the lower extremity is involved, the treatment refers primarily to the disabilities of the lower extremity caused by anterior poliomyelitis. The operation of tendon transplantation dates back twenty years, but it is only recently that there has been a very general exploitation of the possibilities of the procedure. Its actual worth in orthopedic treatment is, however, as yet undetermined. Practical cure is only possible in those cases in which the paralysis is restricted to one of the weaker muscles. Successful treatment is not synonymous with cure; on the contrary, some of the most satisfactory results are those in which the main object of the procedure has been primarily to remove a distorting force, the actual transplantation being of secondary importance. Many results of tendon transplantation are reported a few

months after the operation, with the idea that further functional improvement may be expected with the lapse of time, whereas in most instances the contrary is the fact. The standard by which to test the results of tendon transplantation as a means of cure must be normal function. As regards the foot, for example, the ability to carry out the normal movements and to assume the normal postures when in use. From this standpoint one must conclude that the operation is essentially palliative rather than curative, and that in most instances it will supplement, rather than supplant, mechanical support. Arthrodesis or artificial ankylosis was originally introduced that the patient might dispense with apparatus by changing a dangling, insecure support to a rigid one. The field is very limited, and as a rule should only be performed in later adolescence or adult life, because stiffened joints before this period usually become distorted unless additional support is applied.

Misapplied Mechanical Support to Weak Ankles of Children.—H. AUGUST WILSON (*Annals of Surgery*, vol. xxxv, No. 3).—The author calls attention to the fact that the foot best performs its functions when it has been freest from restraint, and that the natural foot can be quickly crippled into inefficiency by high counters, corset shoes, arch-raisers, wedges and elastic anklets. The natural foot when burdened with misapplied mechanics is rendered weak, and therefore susceptible of sustaining injury, such as sprains and the formation of bunions, flat feet, wobble joints, etc.

The natural foot in a constitutionally weak or rachitic child may demand mechanical aids specially adapted to the individual requirements and peculiarities of the case.

It is urged as the duty of the medical profession to discourage the indiscriminate use of high counters, corset shoes, elastic anklets, arch-raisers and sole-wedging, which are known to be injurious, unmechanical and productive of permanent loss of function.

Orthopedic Operations for Intractable Cerebro-Spinal Cord Lesions, with Report of Two Cases.—HOMER GIBNEY (*Medical News*, vol. lxxx, No. 20).—The point emphasized by the author is to operate on these unyielding, stubborn and intractable deformities of cerebro-spinal origin, and having corrected or overcorrected them, to apply promptly a well-fitting, comfortable apparatus best suited to each individual case, thus facilitating locomotion and in a degree ameliorating the condition.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Diphtheria of the Conjunctiva Treated by Antitoxin.—HOLT (*Archives of Pediatrics*, May, 1902). reports a case of severe diphtheria of the conjunctiva in an infant of six months. The right eye was much swollen and reddened, and on everting the lid a patch of gray pseudo-membrane was seen covering about half the lid. There was marked conjunctivitis, and the cornea was slightly cloudy. No membrane in the throat or elsewhere; general symptoms those of moderate prostration. Temperature, 102°.

A fresh smear, and later a culture, showed presence of diphtheria bacilli. Two thousand four hundred units of antitoxin were administered, ice compresses applied, and a solution atropin dropped into the eye. In forty-eight hours temperature was normal. Improvement of eye was rapid, though the mem-

brane did not entirely disappear till the sixth day. On the tenth day the eye was entirely well.

The author points out that in pre-antitoxin days these cases usually went from bad to worse, ending in the destruction of the eye.

Action of Ozone in Whooping-Cough.—DELHERM (*Arch. de Med. des Enfants*, May, 1902) has treated twenty-eight cases of pertussis by inhalation of ozone. He describes the apparatus (a portable one) for the generation of ozone, and draws these conclusions:

1. Ozone is not a specific for whooping-cough, but it possesses very marked antispasmodic properties.
2. It has no effect in the catarrhal stage, and should be used only during the paroxysmal stage, three to four inhalations of ten minutes each being given in the twenty-four hours.
3. It rapidly diminishes the number of attacks.
4. It diminishes the congestive phenomena of whooping-cough.
5. Cases complicated with broncho-pneumonia did not have the number of their attacks lowered.
6. The paroxysmal period is often much shortened and the violence of the individual attacks much diminished.
7. Treatment should be continued a fortnight.
8. Given according to the method indicated; ozone is not at all toxic, and could even be given in combination with other remedies.

Treatment of Whooping-Cough by Compressed Air.—ROGAZ and DELMAS (*Arch. de Med. des Enf.*, May, 1902) report fifty cases of pertussis treated by this method. The precautions to observe are to have the pressure in the air chamber increased very gradually and decreased just as gradually. The extreme pressure (used only after several sittings) was one and two-thirds atmospheres. The time of the seances varies from one-half to one hour. The authors claim from the method of treatment that—

1. The attacks are modified in frequency, intensity and duration.
2. The total duration of the affection is much shortened.
3. The catarrhal bronchitis is much diminished.
4. The general condition improves decidedly under the treatment.
5. No accidents have ever attended the use of the treatment, and the dilatation of the right heart (so often found in severe pertussis) is no contraindication.
6. The treatment is applicable to children of all ages.

Buttermilk as Infant Food.—SALGE (*Jahrbuch fuer Kinderheilk.*, vol. 55, page 157, Feb. 1, 1902) reports the results obtained with buttermilk in the feeding of infants. One hundred and nineteen infants in Heubner's wards in the Charite Hospital in Berlin were put on this food.

Particular care was taken in the selection of the buttermilk, which, by repeated analysis, was shown to contain 2.5 per cent. of proteid, 0.5–1 per cent. fat, and 3–3.5 per cent. of sugar. The buttermilk was acid in reaction, and though not sterile was never used if it was more than twenty-four hours old.

15.0 wheat flour were mixed with a few spoonfuls of the buttermilk and 60.0 of sugar added. To this enough buttermilk was added to make one liter. The mixture was then slowly heated, taking about twenty minutes to bring it to the boiling point. It was then put into hot, sterile bottles which were sealed and placed in the ice chest to cool. Further sterilization was not necessary. Excellent results were obtained in the treatment of acute dyspepsia with this mixture. The children, varying in age from two weeks to three months, were given nothing but weak tea for one day, thereafter appropriate quantities of this mixture.

In several cases of severe enteritis this food also acted very well, the stools diminishing in number and improving in appearance, and the infants gaining steadily in weight. It was also found that the food was admirably adapted for cases of mixed feeding, various cereal foods being used in addition in certain cases.

In a few cases the observations were followed up with reference to the later development of rickets in infants fed on this mixture. No evidences of rickets were found in the cases examined.

The Feeding of Children During Their Second Year.—T. S. SOUTHWORTH (*Archives of Pediatrics*, May, 1902) in a very suggestive article emphasizes the fact that there is often great carelessness in the selection of a dietary during the second year. He insists that cow's milk should be the basis of a child's food at this time. Various articles may, however, be added with advantage.

Stale white bread, zwiebach, or simple crackers are usually relished and are allowable. Orange juice and prune juice are valuable to correct tendency to constipation. Thoroughly baked apple may be allowed.

Meat juice, except in children of nervous, rheumatic or gouty tendency may be used occasionally, though an excess must be avoided.

The various cereals, well cooked, should form a large part of the dietary, and the author sees no objection to a well-baked potato.

Soft boiled eggs are allowable at intervals.

Sweets should be absolutely avoided; so also tea, coffee, and beer (unfortunately the latter is given almost as a regular thing to children of the poorer classes).

Attention is also called to the fact that during the heated term, children should be put on light diet, and the point is made that undiluted milk is not necessarily light diet, so that dilution is necessary.

"Attention to this detail is perhaps the most important measure of prophylaxis in the whole realm of pediatrics."

Acute Intestinal Obstruction in Children.—WERTHEIMBER (*Jahrbuch f. Kinderheilk.*, vol. 55, p. 478, April, 1902).—In an article on this subject Wertheimber reports a case of obstruction in a girl of ten showing all the classical symptoms, which yielded, though not at once, to belladonna. This was given in the form of suppositories, each containing one-fourth grain of the extract, which were administered four hourly. In all, fourteen of these were given, amounting to one-thirtieth grain of atropin.

The exact nature of the obstruction could not be determined.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

A Case of Polyneuritis Following Malaria, with Autopsy.—LUZZATTO (*Berlin. Klin. Woch.*, April 28, 1902).—That polyneuritis can develop from a malaria is no longer a matter of question, as there are some forty cases already published. This is an account of a thirty-one-year-old laborer, who developed malaria a year or more before he became the subject of neuritic manifestations. These came on suddenly with pain and great muscular weakness. The muscles were flaccid and atrophied to a marked degree, especially on the extensor surfaces. No objective disturbances in sensation, but spontaneous pain, especially at night, was present. The reflexes were absent and the nerve roots were sensitive to pressure.

The man died of pneumonia. The autopsy showed marked evidence of malarial infection, though the plasmodia had not been demonstrated during life. The peripheral nerves were the seat of marked degenerative changes, especially in the axis cylinders and the myaline sheaths, which showed typical neuritic changes. Anterior horn cells, especially in the cervical region, were abnormal, according to the Nissl stain. These changes in the cord are probably secondary to the neuritic changes in the peripheral nerves. As no malaria plasmodia were found, it is probable that in this case the pathological appearances were not a result of a direct action of the malarial bodies, but probably an effect of the toxic action of the parasites.

A Case of Temperature Crisis in Tabes Dorsalis.—OPPLER (*Berlin. Klin. Wochenschr.*, No. 15, 1902).—Fever crises are sufficiently rare in tabes to be worthy of mention. Pel published a case in 1899, and he was not able to find, up to that time, a like case in the literature. The case is as follows: A man, forty-one years old, had very marked attacks of tabetic gastric crises, during which the prostration was very great. These attacks were repeated at intervals of six to eight weeks; at no time during them, or in the period between them, was there any rise of temperature. The usual tabetic symptoms became more pronounced, but the gastric crises changed in character. The prostration and weakness remained, but instead of the gastric symptoms there was a marked rise in temperature. The evening temperature was 40.4° C. in the axilla, and the morning temperature 39.2° C. Attacks took place at irregular intervals, while the gastric symptoms completely disappeared. It was found that phenacetin, in fifteen-grain doses, could control the fever if taken at the beginning of an attack. In all of these febrile crises careful examination of the spleen and other organs, for malaria, etc., was made, but always with a negative result. Whether they were caused by a central irritation of the fever center, or by the resorption of toxic materials caused by the suppression of the gastric crises is a question which further observation must determine.

A Contribution to the Question of Infantile Tabes.—IDELSOHN (*Deutsche Zeitsch. fuer Nervenheilk.*, vol. xxi, Nos. 3 and 4).—The mother of this child was treated for syphilis by the author, she having been infected by her husband shortly after her marriage. The first pregnancy ended in abortion. Four years after having been treated by inunctions, she gave birth to a child who is the subject of the above paper. The child is now six years old. The left pupil is much larger than the right and in neither is there any reaction to light; they both react to accommodation. Some diminution in the pain sensation in both legs. The patellar and Achilles tendon reflexes in both legs are absent. The peculiar combination of the luetic infection of the parents, the abortion of the mother, the death of a child in early years, point to a hereditary lues in this child, but there is wanting all objective evidence. It rather points to a localization of the syphilitic process in the central nervous system. There seems little doubt but that this is a good example of infantile tabes, of which numerous examples have of late been published. The difference between an adult and an infantile tabes seems to lie chiefly in the more benign character of the latter. In neither is there any pathological evidence of syphilis as such, nor does an anti-syphilitic treatment afford any improvement. This would seem to prove the metasyphilitic nature of tabes in children as well as in adults.

Laughing Attack (Lach-Schlag).—OPPENHEIM (*Monatschr. fuer Neurolog. und Psych.*, April, 1902).—This case seems to be unique, though now that Oppenheim has called attention to it other examples will no doubt be observed. The case is as follows: Eighteen-year-old girl, with no neuropathic history, shows this

startling condition when she is attacked with a hearty spell of laughter. The eyes become fixed, the face twisted, objects drop from her hand, and she falls to the ground; consciousness seems to be lost. Biting of the tongue and involuntary escape of urine were not observed. Such an attack happens only when the patient laughs violently, never at any other time. An attack cannot be brought about by sensory stimulation, such as tickling the feet. The condition has lasted for over a year. The objective examination was absolutely negative. In considering the nature of this case, the following were thought of: Epilepsy or hysteria, in which the laughing might be considered in the nature of an aura; organic brain disease, as for example a new growth in the territory of the medulla, which becoming swollen through hyperemia, presses upon the vasomotor center and causes the attack; multiple sclerosis, where the impulsive laughing commonly seen in that disease might be considered similar; the crises found in tabes, as ictus laryngis, etc. None of these seemed to offer any satisfactory explanation of the case, and further observation of similar cases is necessary before a conclusion is reached. No adequate name could be found by the author. The names Galossyncope, Galoplegie, Ictus ridentis, are less satisfactory than the merely descriptive term given by the author.

A Case of Primary Degeneration of the Pyramidal Tracts.—W. G. SPILLER (*Jour. of Nerv. and Ment. Dis.*, May, 1902).—Spastic spinal paralysis has no uniform pathological basis. A primary degeneration of the pyramidal tracts not resulting from a focal lesion is rare. Clinical summary: A woman, fifty years of age, developed suddenly weakness in her left upper limb, with loss of speech. The power of speech was regained after a day or two, but never again was quite normal. Two years after this attack she noticed that she was weak in her lower limbs and that the weakness gradually increased, so that walking became difficult. The reflexes in all extremities were exaggerated, and the Babinsky reflex was obtained. The gait was not decidedly spastic. No objective sensory disturbances were found and no pains were felt in the limbs. Muscular atrophy was not observed. Degeneration of the pyramidal tracts was found extending as high as the pons, but not above this. The degeneration was less intense in the anterior pyramid. The other tracts in the cord were normal; no meningitis; the cell bodies in the anterior horns of the cord were in part diseased.

The Muscular Factors Concerned in Ankle-Clonus.—S. WIER MITCHELL (*Jour. of Nerv. and Ment. Dis.*, May, 1902).—In a case of trauma of the spinal cord, the author observed that the remarkable ankle-clonus present was the work of the soleus muscle alone. The gastrocnemius was entirely passive. It has always been taken for granted that the whole group was concerned. Gowers believes that the gastrocnemius is the active agency in causing ankle-clonus. It was at first supposed that the case above was an exception, but on examining a number of cases of spastic conditions it was observed that in all of them the soleus alone was active in the clonus of the ankle. The proof is readily to be had in thin, spastic patients. To test the matter, let the patient be at rest, supine, with the leg fully flexed on the thigh; then grasping the belly of the relaxed gastrocnemius, with the other start the clonus. It will be observed, as the foot is flexed by the hand, the gastrocnemius is felt to become tense, but that as extension occurs no motion is felt in the belly of the muscle. The active agent in the series of extensions can only be the soleus.

A Case of Asthenic Bulbar Paralysis, with Autopsy.—LIEFMAN (*Deutsche Zeitschrift fuer Nervenheilkunde*, Bd. 21, March, 1902).—This disease has been of such great interest to neurologists of late than any new case, especially if pathological examination is included, is worthy of attention. Clinical resume: Nine-

teen-year-old girl, five years before the first appearance of the disease had an attack of diphtheria. In the course of two years she developed paralytic symptoms in all of the motor cranial nerves. The process began with a left-sided ptosis and facial paresis. After many remissions and exacerbations, a fully developed picture of facial diplegia, ophthalmoplegia externa duplex, with dysarthria and dysphagia developed. The muscular weakness was very marked. There was no typical myasthenic electrical reaction. Death took place with symptoms of dyspnea. The autopsy showed no changes that would adequately account for the serious clinical symptoms. There were no changes found in the muscles or in the nuclei of the cranial nerves. The only pathological alterations having any significance were a large number of homogeneous circumscribed foci, somewhat resembling casts in kidney specimens. These were found especially in the interstitial substance about the blood vessels and lymph spaces. These probably have no importance in regard to the pathogenesis of the disease. Infection, auto-intoxication, congenital weakness of the nervous system, have all been considered as possible etiological factors in the disease, especially the last one. Before an adequate explanation of this disease can be offered, two lines of inquiry must be followed, according to the author: experimental pathology and the chemistry of metabolism. The histology of the nerve cell will probably not throw much light on the subject.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

The Nature of Prostatic Hypertrophy.—GREENE and BROOKS (*J. Am. Med. Assn.*, April 26, 1902).—From the histologic study of fifty-eight hypertrophied prostates and the macular inspection of others, Greene and Brooks, after an elaborate exposition of their microscopic findings, conclude as follows:

1. Prostatic hypertrophy of the aged is the result of chronic prostatitis.
2. It most frequently arises from chronic posterior urethritis, of whatever cause.
3. True neoplasms of the prostate are rare and are not concerned in the production of prostatic hypertrophy.
4. Carcinoma is apt to occur in the hypertrophied prostate as a result of the chronic inflammatory process.

Suprapubic Cystoscopy.—KENNEDY (*Med. Rec.*, April 19, 1902).—In one case of prostatic retention the author made a suprapubic puncture for its relief, using a No. 21 Otis endoscope as a canula. The urine was drawn through this in stages by plugging and unplugging the instrument. Afterwards the lamp was attached to the endoscope and the bladder wall observed. The general condition of the bladder was plainly visible and the mouths of the ureters easily detected. It was impossible to learn as much of the size and contour of the prostatic lobes as desired, owing to the fact that with reflected light the distal end of the tube had to be almost in contact with the bladder wall in order to illuminate it, thus giving a very limited area under observation. Kennedy proposes that a better view could be obtained by using a short Valentine endoscope, with the light introduced through it and bent at an angle so as not to be in the line of vision.

Syphilis of the Bladder.—MARGOULIES (*Ann. des Mal. des Organ. Genito-Urin.*, April, 1902).—It is rather surprising that works upon syphilis are peculiarly

silent upon syphilis of the bladder. This is not so much because it does not occur as because it seems to escape recognition. After calling attention to a few evident cases in French, Russian, German and American literature, the author reports three cases of his own: one showing a tumor formation at the bas-fond, one an ulceration, and the third a hemorrhagic cystitis, all of which resisted other modes of treatment, but yielded steadily and rapidly to specific treatment.

While there are no particular specific symptoms by which syphilis of the bladder may be diagnosed, we must consider the possibility that the pains are of a syphilitic character, particularly if the history indicates that the patient has contracted syphilis, or if there are any manifestations from which we might suspicion it. More especially is it indicated if the local symptoms of the bladder are severe while the patient's general health remains good and the composition of the urine is but insignificantly modified. Finally, in doubtful cases, after a more or less prolonged treatment by other means without result, it is indispensable to essay the anti-syphilitic treatment, which, if it gives good results, confirms the diagnosis. By means of the endoscope we can watch not only the original lesion, but its retrogression, disappearance and whatever cicatrix it may leave.

New Method of Anchoring the Kidney.—DAVIS (*J. A. M. A.*, May 10, 1902).—The method consists in isolating a bundle of fibres of the quadratus lumborum muscle and surrounding these fibres with a flap of the proper capsule of the kidney. This flap is now stitched to a second flap of the *capsula propria*, so that the bundle of muscular fibres pass between the capsule and the kidney itself. This is but a preliminary report, and the one case operated upon is of too recent a date to predict the final results.

Pus Dilatation of One Member of a Double Ureter.—MUNRO (*Annals Surgery*, May, 1902).—In this case one member of a double ureter was distended with pus to the extent of nearly a pint. It communicated with the kidney above, but in the lower end there was a kink taking the shape of an omega, below this a probe could be passed freely into the bladder. The extra member was ligated above and below and excised. It was lined with mucous membrane.

It is of interest that in catheterizing the ureter from the bladder, the catheter drew urine free from pus, while around the catheter pus exuded freely. Evidently the catheter tapped the healthy ureter above its junction with the diseased member.

Contribution to the Pathological Anatomy of the Bladder.—HALLI and MOTZ (*Ann. des Mal. des Organ. Genito-Urin.*, January and February, 1902).—This is a most excellent and full study of the subject, and justice to the article cannot be done here.

Briefly the authors conclude in part as follows: In pure chronic cystitis the lesions are total, involving all the layers of the bladder wall from the mucous membrane to the external fibro-serous coat. The muscular hypertrophy intermixed with dense, thick, conjunctive tissue, involves the three muscular layers quite equally.

The chronic vesical lesions accompanying strictures differ but little from those of pure chronic cystitis. Here the thickness of the vesical wall reaches its maximum.

With prostatitis the lack of power of the vesical wall is largely due to the atrophy of the muscle fibres and their replacement by the large amount of connective tissue. The bladder of prostatitis differs from that of pure chronic cystitis especially in the unequal hypertrophy of the internal muscular layer allowing of the formation of trabeculae, and the atrophy of the external muscular

layer, allowing the herniæ of the mucous membrane, and thus the formation of sacculi.

In cachectic patients with neoplasms there is a simple atrophy of the muscular fasciculi accompanied by a superabundance of generalized, soft, fatty infiltration, a true fatty degeneration of the bladder walls.

Suppuration from Gonococci of a Wound for Radical Cure of Hernia in a Blennorrhagic.—GUELLIOT (*Ann. des Mal. des Organ. Genito-Urin.*, April, 1902).—Patient was operated upon for right inguinal hernia. Next day acute gonorrhea developed in the patient. Four days later the temperature reached 38.2°, and upon opening up the hernia wound a mixture of blood and pus exuded containing staphylococci and gonococci. The patient was discharged seven weeks later, cured of his gonorrhea and with a good cicatrix of the wound.

The author thinks that the contamination took place by direct transportation at the time of the operation, and differs with Toussaint, who thinks that in the case he reported the dissection of the sac from the vas alighted an already gonorrheally inflamed deferens, thus producing a deferentitis and phlegmonous peri-deferentitis. The author believes that this, too, was a direct infection from the urethral discharge, but as the wound secretions were examined late, it was impossible to say whether the infection was primary or secondary.

In the light of these experiences it is well to examine the genital organs before doing an operation for hernia.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Statistics as to the Parasiticity of Alopecia Areata.—M. HALLOPEAU (*Annales de Dermatologie et de Syphilographie*, April, 1902).—M. Hallopeau, to elucidate this point, addressed the following questions to various confreres: 1. What proportions of cases per thousand have they observed alopecia areata in their private practice? 2. By what means have they been able to verify the contagiousness of this malady?

Sixty-one responses were received, and from these the following conclusions are drawn:

1. Alopecia areata frequently attacks subjects from direct or indirect contact.
2. Alopecia areata is a rare disease.
3. The transmission presupposes a parasite.
4. The difference in frequency of the disease in the various countries can only be explained by this interpretation.
5. The facts fail to show that direct and intimate contact is necessary for transmission.

The Currents of Emigration and the Expansion of Leprosy.—M. E. JEANSELME (*Gazette des Hopitaux*, April 19, 1902).—From the study of the emigration of lepers in different parts of the world, the writer has formulated the following very important conclusions:

1. When leprosy is imported into a country of a white race and the civilization is European, it makes little progress.
2. All of the immigrants tainted of leprosy are not dangerous to the same degree for the white population, as a white leper is more apt to come into inti-

mate contact with the white population than one of another color, as was instanced by the immigration of Caucasians and Chinese into Queensland.

3. When white immigrants free from leprosy establish themselves in a leprous country they rarely become infected with leprosy.

Some Remarks on Forms of Trade Dermatitis Occurring in the Silver and Electro-Plating Trades.—ARTHUR HALL, M. A., M. R. C. P. (*British Jour. of Dermatology*, April, 1902).—In the process of what is technically called "scratch-brushing," spoons, forks, etc., are cleaned by a revolving brush onto which sour beer, bought from breweries, drops from a trough above. This sour beer causes in the susceptible an eczema or dermatitis wherever it splashes, especially of the hands and forearms, as is proved by several cases cited by the author. In polishers and burnishers dermatitis, or eczema, is caused by the "rouge" which they use, the so-called "quick-rouge" being especially irritating; the mercury, which they all contain, is probably the poisonous principle.

In the treatment of these cases, where they do not have to dip their hands in liquid, a modification of Unna's zinc-gelatin is very efficacious, as it is also a protective. The formula is as follows:

R	Gelatin	16
	Calamine	12
	Glycerine	20
	Water	26
Mix *		

Clinical Diagnosis and Histology of Rodent Ulcer.—MM. DUBREILH and B. AUICHE (*Annales de Dermatologie et de Syphilographie*, April, 1902).—If one considers epitheliomas of the skin, especially those of the face, one is struck by their diversity, clinically as well as histologically. The frequency of the benignity of these epitheliomata is strikingly compared to those of the tongue, for instance; but this benignity is not always constant, for they often invade the ganglia and become general.

Epithelioma of the face may be divided into three principal clinical types:

1. Those of the lower lip (canceroid). They occur upon the vermilion border of the lip, often from a plaque of leucokerotosa, and are much more infectious and dangerous than any other form of epithelioma of the face, but less so than those of the tongue.

2. Epithelioma vulgaris, which may occur upon any part of the face, but especially about the middle of the zone extending from one to the other ear. These epithelioma are especially seen in countrymen and those exposed to wind and weather. They begin generally as a plaque of keratosis similis, as a thickening; become indurated and ulcerate, and when once they commence, their progress is exceedingly rapid; ganglion after ganglion is infected until the condition becomes visceral, cachexia and death supervenes. The progress of this form is far more rapid than the rodent ulcer, the infiltration of the underlying tissues more diffuse and profound, and the condition more inflammatory.

3. Rodent ulcer, which occurs most frequently in the upper part of the face, notably in the neighborhood of the inner angle of the eye. Sun and weather have no influence upon its development; it is preceded by a precancerous alteration of the skin as a firm, elevated nodule of pale or rose color. This nodule grows, ulcerates in the center and forms an ulcer with a flat bottom covered by little rose-red, firm granulations, which discharge a quantity of a light serum. The borders are sharply limited and hard, rose-red, yellow or pigmented, having the character of the nodule from which they sprang. The evolution is very slow, lasting five to twenty years; the lymphatic ganglion remain free.

*The manner of using this varnish or paste is given in all text-books upon dermatology under the head of zinc-gelatin.—(UNNA.)

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

The Ear Complications in a Severe Typhoid Epidemic.—SUCKSTORFF (*Zeitschrift fuer Ohrenheilkunde*, xvi. Band, Heft 1.)—In the fall of 1900 there was a severe typhoid epidemic in the city of Rostock, in which ear complications were frequent. Out of ninety cases, fifteen (or 13.4 per cent.) died. Eight of the cases (or 7.7 per cent.) had ear complications in spite of all precautions. In none of the cases was there any external ear trouble. In one the diagnosis was in doubt. The patient complained of deafness with ringing noises in the ear. There was some slight retraction of the drum. These symptoms disappeared. The patient had two relapses, but there was no return of the ear trouble. The others were outspoken cases of otitis media. The first symptoms appeared on the seventeenth, eighteenth, twenty-first, twenty-fourth, and twice on the twenty-fifth and twenty-eighth day of the disease. Two of the cases developed mastoiditis, one with an extradural abscess and destruction of the sigmoid sinus. The early and frequent involvement of the mastoid in otitis following typhoid is well known, hence this high percentage can be accounted for; but, on the other hand, both these patients were very somnolent, and all subjective symptoms were wanting. An early paracentesis might have obviated the mastoid complications. For the past year it has been the practice at the University Hospital at Rostock to examine the ears of all typhoid patients who become somnolent. The writer urges that this should be more generally followed.

On the Anesthesia of Mucous Membranes with a 25 Per Cent. Alcoholic Solution of Cocaine in Operations on the Nose, Pharynx and Larynx.—WROBLEWSKI (*Archiv fuer Laryngologie und Rhinologie*, Zwelftes Band, Heft 3).—The author greatly lauds the anesthetic action of the alcoholic solution of cocaine. With an experience of more than fifty cases in children as well as in adults, he has never seen any symptoms of cocaine intoxication. He believes that the alcohol acts as an antidote. The solution is best prepared by placing the cocaine and the alcohol in a test-tube and gently heating until the boiling point is reached. The cocaine quickly dissolves and the solution remains permanently clear. The first application of this solution causes considerable smarting, but may be obviated by first applying a weak watery solution of the same drug. It requires very little of the solution to produce complete anesthesia. The writer has employed this solution in the removal of adenoids and tonsils, as well as in various operations on the nose and larynx, with gratifying results.

On the Controlling of Hemorrhages After Tonsillotomy.—HEERMANN (*Archiv fuer Laryngologie und Rhinologie*, Zwelftes Band, Heft 3).—The writer reports a case of severe hemorrhage following the removal of a tonsil in a man aged forty-six. Failing to control the hemorrhage after resorting to various methods, such as compression, etc., he followed a method which has been used in such cases in the Burger spital of Cologne for the past twenty years, viz., the passing of silk ligatures through the anterior and posterior pharyngeal pillars and securely binding them together. The hemorrhage was immediately checked, and the ligatures caused the patient no inconvenience. With a properly constructed needle-holder the procedure is not a very difficult one, and the author believes it to be a precaution that should be more frequently employed, especially in cases which have reached a certain age when the tendency to hemorrhage is marked and medical aid is not at hand.

Indications for the Mastoid Operation.—HAMMOND (*American Medicine*, April 12, 1902) believes that mastoid abscesses invariably come from an infected middle ear. There are some subjects, particularly tubercular patients, who suffer but little actual discomfort during the progress of the disease, but ordinarily the pain is very severe. Tenderness on pressure over the mastoid is an important symptom when present. There is generally no swelling over the mastoid process until a later stage in the disease, and this is usually preceded by a swelling of the upper and posterior canal wall. This swelling may occlude the entire canal. Persistent tenderness of the mastoid with this swelling of the canal wall is always a signal to operate. The mere fact of absence of tenderness on pressure signifies nothing. This is especially true in chronic cases. The absence of heightened temperature does not indicate that the mastoid is free from inflammation, for cases are seen repeatedly with practically no fever, in which the mastoid is full of pus. The first thing to ascertain when examining a suspected case of mastoid trouble is as to the presence or absence of pus in the middle ear. A free incision should be made in the drum in all cases in which the drainage is insufficient, and in cases where there is any tenderness of the mastoid, cold applications may be made with advantage. The ear should be frequently cleansed, and the use of a hot douche every two hours will do this and will also aid in allaying the inflammation. If, in spite of all our efforts, the tenderness of the mastoid increases, or swelling of the canal wall appear, it is better to operate at once. If tenderness of the mastoid persists for a period longer than two weeks, with a continuous discharge from the middle ear, it is usually the safest plan to operate. As Dench has recently pointed out, the operation, when carried out by competent hands is never dangerous, while the disease frequently is.

The author summarizes as follows:

1. Mastoiditis is always subsequent to purulent inflammation of the middle ear.
2. Tenderness of the bone is an important symptom when present, but the mastoid may be full of pus with absolutely no tenderness.
3. Bulging of the canal wall is a most important symptom.
4. The absence of fever is no guide whatever.
5. Improvement in the hearing is usually indicative of subsiding inflammation in the middle ear.
6. The operation is safe; delay may be dangerous.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

Rare Ocular Complications of Parotitis.—STREZEMINSKI (*Recueil d'ophthalm.*, February, 1902).—Abscess of the eyelid, which was observed by the writer during the period of incubation of mumps, is believed to be a unique complication of the general affection. In the absence of a history of trauma, etc., the ocular trouble may fairly be ascribed to a metastasis of the specific infecting agent.

Another case developed, in the third week of convalescence, a typical unilateral optic neuritis with total abolition of central vision. Perimetric examination revealed a large central scotoma with, however, the preservation of the normal peripheral field. Eventually the scotoma entirely disappeared.

Hyperemia of the disk and dilatation of the papillary vessels are relatively

frequent. Neuro-retinitis may occur from two to several weeks after the beginning of the attack. Occasionally atrophy ensues, and hence the prognosis should always be guarded.

A complicating dacryoadenitis is to be explained on the ground of the similarity of structure of the parotid and lachrymal glands. Paralysis of accommodation and of the recti interni have been noted.

Cases of Corneal Complications in Conjunctivitis Due to the Koch-Weeks Bacillus.—E. A. SHUMWAY (*Pa. Med. Journ.*, April 26, 1902).—Shumway has observed marginal corneal phlyctenulae in a few cases of acute catarrhal conjunctivitis due to the Koch-Weeks bacillus. The observation conflicts with the experiences of others who regard the co-existence of acute conjunctivitis of specific origin and corneal complications as purely adventitious. In each of the three cases reported there was a definite history of contagion.

The Influence Immigration Has on the Spread and Increase of Trachoma in the United States.—A. E. DAVIS (*The Post-Graduate*, May, 1902).—Standish's paper on "Contagious Conjunctivitis" (1897), in which the author ascribed the continuance and spread of trachoma in the eastern cities of the United States to the constant influx of fresh cases from Europe and Asia was directly instrumental in bringing about the ruling of the Treasury Department that trachoma was a "dangerous contagious disease," thus requiring deportation of immigrants so afflicted. Davis has endeavored to determine: (a) To what extent the law of deportation has been enforced, and the number of immigrants deported under its operation. (b) The percentage of cases of trachoma in the clinics of the large eastern cities before and since trachoma was excluded as a dangerous and contagious disease.

(a) Prior to the promulgation of the order no definite knowledge obtains as to the frequency of trachoma in immigrants, inasmuch as the medical officers of the Marine Hospital Corps took cognizance of those cases only which were in the acute stage or whose sight was already seriously impaired. In 1899 the ratio of immigrants deported from New York on account of trachoma to the total immigration was as 1:800. In 1900 the ratio was 1:1300. In 1901, 1:1700. Statistics compiled from the records of other eastern ports exhibit very wide discrepancies and are probably unreliable. Nevertheless, a comparison of the total number of immigrants deported for trachoma with the total immigration at practically all the ports of entry of the United States gives, in the first year after the order went into effect, a ratio of 1:1000, in the second year 1:1500, in the third year 1:2100. Worthy of note is the "steady decrease in the number of cases of trachoma coming to this country since the law of exclusion was operative against them, a fact to be accounted for by the efficiency of inspection of immigrants here and abroad."

A certain number of trachomatous cases have been admitted under the ruling that a husband who has become a naturalized citizen may have his wife and minor children brought into this country although afflicted with a "dangerous contagious disease." Some cases, also, have entered through ports where inspection is less rigid than in New York. Immigrants known to be trachomatous are not infrequently booked to Canadian ports whence they easily make their way into the United States, their ocular trouble escaping undetected. Despite these antagonistic factors the law must be considered fairly effective, inasmuch as 900 cases of trachoma have been deported under its operation. The writer, while acknowledging the efficiency of the officers of the Marine Hospital, suggests that a six months' service in an ophthalmic clinic would better fit them for the detection of trachoma in all its manifold expressions.

(b) In 1891 statistics comprising more than 500,000 cases of eye disease collated from New York, Boston, Philadelphia and Chicago, gave for trachoma 4.25 per cent. In 1901, three years after the law of exclusion of trachoma went into operation, 90,000 cases in these cities (Chicago omitted) gave trachoma 2.71 per cent., showing a decrease of nearly one-half.

Polyarthrititis Gonorrhoeica Following Ophthalmia Neonatorum.—W. ALTLAND (*Klin. Monatsblatt f. Augenheilk.*, April, 1902).—Comparatively few of the observations of associated polyarthrititis and blennorrhea neonatorum have taken into account the postulates necessary to determine the precise etiologic connection, viz., the presence of the gonococcus in the conjunctival secretion and in the exudate from the joint. This is due in part to the rarity of the associated affection, in part to the difficulty of cultivating the organism. In a series of 660 cases of ophthalmia neonatorum occurring since 1876 in the ophthalmic service of the Allgemeine Krankenhaus at Hamburg-Eppendorf, this complication was observed but once. In the case reported both knee-joints became involved nine days after the beginning of the ocular trouble. The gonococcus was found in great abundance in the secretion from the conjunctiva. Several punctures of the knee-joints gave a thick, flocculent exudate containing numerous diplococci, reacting typically to stains. Cultures on human blood-serum glycerin-agar showed typical colonies. The patient made a complete recovery from the joint affection in three weeks.

The literature contains but sixteen cases of the combined affection, many of which were not submitted to bacteriological examination. The joints most frequently affected are the knee, wrist and ankle, the involvement occurring from five days to five weeks after the ocular infection. Moderate elevation of temperature is not infrequent. Immobilization of the affected joints by splints sufficed, in the writer's case, to effect a complete recovery. The outcome would in general seem to be excellent.

The course of the disease shows a striking similarity to the joint affections consecutive to specific urethritis.

BOOK REVIEWS.

A PRACTICAL MANUAL OF INSANITY. For the Student and General Practitioner. By DANIEL R. BROWER, A. M., M. D., LL. D., Professor of Nervous and Mental Diseases in Rush Medical College, in Affiliation with the University of Chicago, and in the Post-Graduate Medical School, Chicago; and HENRY M. BANNISTER, A. M., M. D., formerly Senior Assistant Physician, Illinois Eastern Hospital for the Insane. Handsome octavo of 426 pages, with a large number of full-page inserts. Philadelphia and London: W. B. Saunders & Company. 1902. Cloth, \$3.00, net.

It is difficult to see just what purpose this text-book is supposed to fill. There are several which have been published in England, which are in every way superior to it, to say nothing of the American treatise by Berkley. It is questionable whether the mere multiplication of text-books on insanity is an advantage. A new text-book should have some definite aim, either presenting some new aspect of the subject, or some new and better arrangement of well-known data. Neither of these seem to be present in this volume. The classification suggested by the authors is based mainly upon that of Kraepelin and Agostini, but is inferior to both. It is puzzling to understand why melancholia, for example, should be considered as a subhead under acquired insanity, and mania under degenerative psychoses. The prevailing tendency at present is to consider these two as one symptom complex. A special division is given to moral insanity, a term which has scarcely a place in a clinical classification at the present time. One valuable feature of the book deserves to be mentioned, and that is, that various systems of classification are tabulated together so that it is possible to see them side by side. The illustrations are useless and crude, as they are not clear enough to tell the reader anything, nor are they selected carefully enough to present characteristic attitudes. The proof-reading is in parts careless and confusing. This book cannot be recommended because it adds nothing to the subject it treats of and does not state that which is already known in a form which renders it agreeable reading.

MORPHINISM AND NARCOMANIAS FROM OTHER DRUGS; THEIR ETIOLOGY, TREATMENT AND MEDICO-LEGAL RELATIONS. By T. D. CROTHERS, M. D. pp. 351. W. B. Saunders & Co., Philadelphia and London. 1902.

The special object of this work has been to group the general facts and outline some of the causes and symptoms common to most cases, and to suggest general methods of treatment and prevention. In this way the author tries to bring the subject out from its present empirical stage, and to encourage further and more exhaustive studies. Morphinism naturally occupies most of his attention, and of the 351 pages of the book, 270 (or over three-fourths) are devoted to this subject. Cocaine, chloral, chloroform, coffee, tea, tobacco and ether are each given a chapter, while arsenic, trional, antipyrin, ginger, cologne, gelsemium, sulphonal, paraldehyde, lavender and capsicum are discussed in less detail. The book is written in an easy, entertaining way, and many interesting and instructive cases are reported.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles, by Leading Members of the Medical Profession Throughout the World. Philadelphia: J. B. Lippincott & Co. 1902. pp. 306.

On the whole, this volume is distinctly superior to many of its predecessors, although, as was inevitable, the quality of the contributions is very uneven.

One of the best articles is by I. Boas, on Habitual Constipation. The etiology and the numerous varieties of constipation are well described, and therapeutic measures are discussed in satisfactory detail. Many of the dietary measures are described fully, and will be found very valuable. Horatio C. Wood, Jr., contributes a valuable article on Methods of Investigating the Action of Drugs; and Charles E. Simon an interesting paper on the Significance of the Basophilic Granules Found in the Red Blood Corpuscles in Chronic Lead Poisoning. Much of the material of the volume has, however, already appeared in previous publications. The Review of the Progress of Medicine During 1901, by E. W. Watson, is especially well written. One of the most attractive features of the volume is its illustrations, a beautiful photograph of Dr. S. Weir Mitchell in his clinic serving as frontispiece. The book will well repay perusal.

DISEASES OF WOMEN. A MANUAL OF GYNECOLOGY. By F. H. DAVENPORT, A. B., M. D., Assistant Professor in Gynecology, Harvard Medical School. Fourth edition, revised and enlarged, with 154 illustrations. Lea Brothers & Co. 1902. Cloth, \$1.75.

This well-known manual for the student and handy book of reference for the busy general practitioner has just appeared in its fourth edition, representing in its new form the latest advances. Clearly, but with considerable detail, the methods of gynecological examination, the simple form of treatment of the most common disorders of the pelvic organs, and the surgical features of gynecological diseases are given. The volume aims to be a practical one and therefore is principally devoted to diagnosis and treatment. Apparently minor points, ordinarily omitted from text-books, are described and explained by the author with remarkable care. Special reference may be made here to the elaborate manner in which the application of vaginal douches (p. 101), or the use of the pessary (p. 153), is dealt with. In a most satisfactory way the subject of menstruation and its disorders is treated in Chapter XIV. We cannot, however, refrain from offering some minor objections. While the writer on page 49 favors the introduction of the examining finger into the vagina under the sheet, he advises a visual inspection on page 60. We are of the impression that the exposure, necessary for inspection or proper introduction of the finger, will not shock the patient's modesty, if done with a certain delicacy. And for various reasons inspection should precede digital examination in every case. We do not agree with the author's view of the usefulness of the sharp curette in the treatment of puerperal septic metritis. Among the symptoms of uterine fibromyomas we miss the well-known alterations of the heart.

These trifling defects cannot detract, however, from the value of this excellent book, which we warmly recommend as a reliable guide for study and information in daily practice.

OPERATIONS. VADEMECUM FUER DEN PRACTISCHEN ARZT. VON PROF. DR. E. LESER, Professor an der Universitaet Halle A. S., Mitglied der kaiserlichen Leopoldino-Carolinischen deutschen Akademie der Naturforscher. Mit 84 zum Theil farbigen Abbildungen. Zweite vermehrte und verbesserte Auflage. Berlin, 1902. Verlag von S. Karger, Karlstrasse 15. Price, \$1.25. G. E. Stechert, New York, Agent.

This neat little volume of 186 pages must in every respect meet the wants of the country doctor who has no time to look up the technique of an operation in one of the larger works, even if he possess them. Leser's book does not embrace all that the specialist for surgery is supposed to need; this is intentionally the case, in order that more space may be afforded for the wants of him to whom the book is dedicated, the country doctor above mentioned.

Short chapters on asepis, antiseptics, wound treatment and local as well as general anesthesia, preface the chapters on the special operations. It is true they are not very exhaustive, but one is safe in assuming that the results in the country would be vastly improved if the doctors could only be induced to follow their precepts.

The illustrations are unfortunately not up to the standard set by the book in other particulars.

Since the first edition the author has improved the work by inviting the suggestions of doctors as to what more was needed by them; certainly an ingenious idea, and one which has been productive of good results. Especial praise may be accorded the plan of naming, before each operation, the instruments needed during what is to follow.

DER MUSKEL UND DAS GESETZ VON DER ERHALTUNG DER KRAFT. Nach einem populär-physiologischen Vortrag von DR. K. BUERKER, Privatdozent fuer Physiologie an der Universitaet Tuebingen. Tuebingen: Verlag von Franz Pietzcker. 1902. G. E. Stechert, New York, Agent.

This thirty-seven page pamphlet on the muscles and the conservation of strength concerns itself chiefly with four points, (1) muscle activity takes place only upon the destruction of a certain quantity of material of known quality; (2) a definite amount of work is performed; (3) that the muscle becomes warmer by this process; (4) the warmth plus the work equals the chemical potential energy used up.

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ORIGINAL ARTICLES.

TREATMENT OF INFECTIOUS SUPPURATIVE PROCESSES IN THE PERITONEAL CAVITY.

BY PROFESSOR L. REHN, of Frankfort, Germany.

It is my object, without again going into the controversy in the treatment of appendicitis, to settle this, in general, most important question for the surgeon and the gynecologist: To what extent can the pus processes in the peritoneal cavity, in their different phases, be treated surgically? And what general rules are to be applied in operating? The limits of surgical knowledge on this subject should not be considered as reached, but the sad fact of unnumbered offerings yearly to the disease mentioned, call forth efforts for better results.

Taking into consideration the great strides which abdominal surgery shows it has taken in the last few years, by which operations have been made common which formerly were considered inexecutable, the hope is justified that the pus processes in the abdomen will be treated with the same sure results.

In the meantime the views upon this subject are widely opposed to each other. Entirely contrary to this dissension, surgeons are universally agreed on the different subjects which lie in close relation to this one: Abscesses adjacent to the peritoneum are opened by every surgeon; in penetrating wounds of the abdomen, immediate laparotomy, being a necessity, is universally known, as also in perforation of the stomach and intestinal ulceration.

In wounds of the abdomen, produced by a blunt instrument, one is with attentive observation of the patient ready to operate the moment that threatening symptoms suggest a visceral injury. Yes, even threatened perforation of the stomach or intestinal ulceration are operated upon, and these are the most grateful cases for operation.

Why treat them so? Because we do not wish to submit our patient to a mere blind accident, but to procure for him the most promising chances for recovery. Although it may be that we operate upon one case that might have been cured without.

The fact that a number of such cases can recover without operation must not keep us from resorting to that treatment which cures all or the most.

The argument, indeed, renders more plain the necessity of operating in pus processes in the abdomen when the existence of an advancing peritonitis shows itself.

Now, one would think it but a short step to attack also those processes whose havoc-producing nature is not beyond all doubt,

The danger of infectious material entering into the abdomen is variable in accordance with the port of entry, depending also upon rapidity of entry, the quantity of infectious material—great or small, whether virulent or attenuated.

The tendency of the peritoneum to adhesions often is an index to the result, as experience teaches us, especially in those parts which are easily shut off (as the space behind the cecum, Douglass' cul-de-sac, subrenal and subhepatic spaces and bursa retro-omentalis). However significant the location of the process may be, no guarantee is thereby given.

At any rate, the infection is primarily restricted, and at this time operative procedures should be instituted; instead, however, the deceptive conclusion is drawn that the peritoneum, having disposed of so much infectious material, can also dispose of the balance.

A sure prognosis, however, is impossible in a process hidden from view. Here let it be pointed out that notwithstanding the attention of laity and physicians on every appendiceal case, and notwithstanding immediate internal treatment in most cases, deleterious results have increased instead of decreased.

He who has opportunity to view these results frequently on the operating table will not be able to grow in faith in the internal treatment. If the internist never contests with the surgeon the treatment of phlegmon in any locality of the body in view of the eye, then with far greater right does the much more difficult treatment of pus processes in the abdomen also belong to the surgeon.

We can at this with surety say: The mild cases can, with judicious attention and proper treatment, without operation, gradually get well. The serious ones do not.

To decide, in the beginning, whether a case before us is mild or severe and serious is impossible; consequently only early operations promise safe outcome. Early operation is my rule—only exceptional conditions ever force me to delay.

That even more advanced cases are spared by operation is a triumph for surgery, but should, however, not lead us to neglect prophylaxis—i. e., early operation.

If in practice most of the cases do not come into our hands so early, but with more or less pus present in the abdomen, these, of all, should not be left to circumstances, with possibility of perforating into the intestine. But especially for the abdomen let the fundamental rule of surgery, "*ubi pus, ibi eracua*," be regarded.

Our technique is far-reaching enough for these ailments, so that it is not only allowable but of the greatest advantage.

The fear of opening the peritoneum in abscesses has two causes, namely: the bitter experiences of many surgeons, and the old dogma—great danger of infecting the peritoneum.

The latter point means a mistaking the danger of a once present peritonitis with the danger of producing it.

All experiments teach that the peritoneal cavity possesses a marked resistance to infectious material, and practical experiences agree herewith. Were this not so, then hardly one intestinal suture would hold; and what is the meaning of the so-called peritoneal irritation but the strong efforts of the peritoneum against infectious matter which has invaded the cavity?

To show where the bitter experiences come from, I give one example: An appendiceal abscess was opened extra-peritoneally, the appendix had to be sought

for whether found or not. A small tear ensued in the peritoneum and the patient died of peritonitis. Similarly can this happen in pus sacs about the kidneys.

The conclusion that opening of the peritoneum had produced peritonitis is certainly false, the incomplete and wrong method of opening it was the cause. Faulty technique produced the tear.

A correct technique is most assuredly necessary for these operations. Next, the field should be within reach, for this—a large, correctly placed incision, not considering possibility of abdominal hernia later. The adjoining gut, to the abscess, should be brought out to view, the magnitude of the abscess shall be carefully investigated; quickly acquainting ourself with this, a gentle hand and a prompt decision are necessities not to be dispensed with.

Gentle irrigation with normal saline solution (38° to 39° C.) is least harmful and the most effective remedy for removing pus from the gut. Sponging and wiping is strongly discouraged.

Evacuation of the pus is followed by freeing of the entire diseased area and removal of the diseased organ, tube, appendix or gall-bladder. In the operation for appendicitis the appendix is sought and should be removed in every case.

Then proper drainage; for this iodoform gauze should be used and best when wound around a drainage tube. When drainage extends through healthy peritoneum, for example, for counter drainage, the smooth rubber tubes are proper. The drains should reach well to the bottom of the cavity, especially in cavities easily infected, for instance, the lesser pelvis.

All drains are placed in the abdomen, either through the anterior or lateral walls. I never drain to the lumbar region and vagina only as dire necessity.

The abdominal wound is closed about the tube the same as any other laparotomy incision. It is a big mistake to think that we give the pus good drainage in leaving the abdominal wound open.

The light intestine forthwith acts as a tampon in the opening. On the contrary, it is of the greatest necessity to restore the normal intra-abdominal pressure, so that by this means the infectious materials may be carried in the direction of the drain.

The normal direction of the lymph toward the diaphragm is somewhat changed by the drain. If we have thinned the infectious material somewhat by means of the saline solution, then it will be carried away much more readily by the drain, and just this should be our endeavor.

The resorption through the diaphragm should be limited as much as possible.

For this purpose the patient should be placed in bed with the upper portion of the body high and the pelvis low. He is admonished to breathe deeply, thereby strengthening and increasing intra-abdominal pressure as the work of heart and lungs are favorably influenced.

The peritoneum, when aided in this manner, offers the operator more favorable opportunity than any other locality in the body, and acts entirely different from the pleura. The remaining clots of fibrin in the abdomen adhering to the gut disappear very rapidly, as we observe in secondary operations or post-mortems.

Just these qualities of the peritoneum for battling against infection (I refer to the large surface for attack and the tendency to encapsulate the infection), on the other hand, make a generalized infection so dangerous.

The same holds good of peritoneal resorption, by aid of which a number of germs or their products are rendered harmless in the blood while it may also bring about a poisoning of the system. Thus die many of our patients, after successful operation or cured peritonitis, in consequence of resorption of bacteria or their toxins.

Regarding after-treatment is to be said that, beginning the first day, the peristalsis is to be excited by saline enemata. By allowing a gentle inflow of saline solution, secretion is washed out of the drains. The patient should be watched over carefully.

It must also be mentioned that in these laparotomies the strictest asepsis is to be maintained, so that the healthy peritoneum may not be infected by the operator before the abscess is reached.

Following tables show what results may be attained by this method:

NO.	CURED.	DIED.
I. Localized Processes 56	55	1 (Phlegmon in Abdominal Wall, Peritoneum free.)
II. General Peritonitis 22	9	13

DIVISION OF GROUP I.

NO.	CURED.	DIED.
Appendicitis 26	26	0
Pyosalpynx 24	23	1
Localized Liver Abscess 1 and Subhepatic Abscess 2	3	0
Abscess of Mesenteric Gland 3	3	0

DIVISION OF GROUP II.

	NO.	CURED.	DIED.
Appendicitis	9	3	6 (a)
Pyosalpynx	13	6	7 (b)

(a) Of those, one, after recovering from peritonitis, had septic endocarditis.

(b) Of those, one, twelve and a half months later, had a subphrenic abscess, peritonitis, recovery.

There is still to remark that most cases of group I can be counted as belonging to the progressive type of peritonitis, as very few were localized.

Especially operations for pyosalpynx are linked with grave processes—abscesses in the pelvis, intestinal adhesions and advancing peritonitis.

Since those tables show that even advanced cases are saved by operation, how much more promising must be the results of an early operation!

THE CONTROL OF HEMORRHAGE IN THE REMOVAL OF PELVIC TUMORS.

BY HERMAN E. PEARSE, M. D., of Kansas City, Missouri.

In the removal of pelvic tumors, control of hemorrhage is the hardest problem we have to solve. It is always present. Adventitious vessels of large calibre are found in unexpected places, due to the enlargement of unimportant branches. The protection of the urinary system is a constant problem. Danger to the bladder or ureter is ever before us. Danger of laceration of a bowel is always present. But all of these are practically unvarying problems; they must always be considered. Should accident happen at any of these points, its repair can be attended to with some degree of leisure; not so with the question of hemorrhage. A tumor has been delivered, adhesions have been to some extent severed, search is being made for its other important attachments, when it is noted that every sponge is crimson and every space is filling with red blood. Like the proverbial bolt of thunder from a clear sky comes the swirling, rushing, welling of blood from the pelvis when a vessel of large size, low in the pelvis, has been opened. The operator needs all his courage, all his knowledge of anatomy and pathology, all his fertile resource gathered from years of experience and study, all his manual deftness and dexterity, ready at his instant command to cope with such an emergency, and even then he may lose the battle if he be taken unawares and has not cool courage and intelligent ability.

The best way to control hemorrhage in the removal of pelvic tumors of the female is to search out and control the vessels that are the source of hemorrhage as early as may be in the operation. Blood supply will be found to precede from two superficial sources, and from several deep sources. The first superficial source is the ovarian or deep spermatic, arising from the aorta or renal artery in the lumbar region and passing downward to the brim of the pelvis, which it reaches opposite to the upper edge of the broad ligament. This is the first artery to be secured in uterine or ovarian tumors; and generally in broad ligament cysts and intra-ligamentous growths that same rule holds good. The second superficial source of blood supply comes from the funicular and round ligament, or the superficial spermatic artery. This is unimportant in normal condition, but being given off from the anterior branch of the internal iliac or from the superior vesical, which in turn is derived from the anterior branch of the internal iliac, it offers an easy means of collateral circulation when the ovarian and the uterine are tied; its origin is but a short distance from the origin of the uterine and is from a common trunk.

The deep sources of blood supply are the uterine artery principally, and after that, enlarged branches from the sciatic, obturator and anterior branch of the internal iliac. The uterine is easily secured, after tying or clamping the ovarian, by cutting down toward the base of the broad ligament where it lies. If the operator secures the uterine artery to the inner side of the ureter, *i. e.*, after the vessel has crossed the ureter in its course from its origin at the internal iliac to its distribution in the uterus, he will be required to control the cervical artery, which is given off from the uterine just before it crosses the ureter. It is well, therefore, in controlling hemorrhage from the uterine artery to lift the

bladder strongly forward, so as to put the ureter on the stretch and follow the artery to a point one-half inch beyond the ureter before securing it.

When the tumor is ovarian and the entire ovarian portion of the broad ligament is its pedicle, much may be gained by a preliminary ligature about the top of the broad ligament at the uterine cornu, embracing the anastomosis between the ovarian and uterine arteries, and then securing the ovarian as mentioned before at the pelvic brim, just beyond the fimbria. Such tumors do not as a rule (unless sarcomatous or tubercular in character) attract blood supply from deep lying arteries. After such ligation or clamping, as has been outlined, an ovarian tumor can be cut away, leaving the two peritoneal edges of the broad ligament lying in reasonable close apposition with perhaps one or two slightly bleeding points. The vessel will be found in the two stumps, one at the pelvic brim under the colon, and one at the uterine angle. The peritoneum can then be sewed. This is safer and more desirable than a large stump ligated *en masse* by a heavy cable of silk penetrating the pedicle and tied "both ways."

When the tumor occupies the uterus (as a fibroid of that organ) the ligation or clamping should take place at the two points of superficial blood supply on each side (the ovarian and the round ligament) at once upon commencing the operation. The broad ligaments can then be divided part way down and the mobility of the tumor tested. Toward whichever side it can be most easily rotated, it should be sharply drawn. This puts the broad ligament on the stretch. The bladder is then separated quickly from the uterus and the broad ligaments and lifted up. This puts the ureters upon tension. The broad ligament is now cut away upon the tense, stretched side until the uterine artery is felt. It is followed by blunt dissection out beyond the point where the cervical is given off and secured. Bladder and rectum are now separated from the tumor as the remainder of the broad ligament is cut away. The vagina is cut about the cervix, and a sponge packed promptly into the opening. The broad ligament on the other side now permits of easy access to the remaining uterine artery from below. The vessels that furnish the supplementary deep supply, the vaginal, the branches from the middle vesicle and from the inferior hemorrhoidal should be tied; too much blood is lost in disregarding them. In removing a tumor in such a manner the whole procedure is orderly. There is absence of hemorrhage, as all sources are found and secured before being invaded.

In carcinoma of the cervix when hysterectomy must be done, it is much better done in the same manner, in so far as ligation of vessels is concerned, except that after tying the uterine on the tense side, the uterus is pulled over to that side and the artery tied on the opposite side in the same way from above. The broad ligaments are now cut away, bladder and bowel are now freed from the uterus, and from the upper two inches of the vagina; all hemorrhage is secured, and the uterus and tumor are freed from all connections; the uterus with its appendages is now thrust into the pelvis and into the outlet, the vaginal tube "telescoping" and the growth appearing outside the body. The pelvic peritoneum is now sewed closely up and the abdomen closed. Passing about to the foot of the table the operator cuts away tumor, uterus and adnexa by one sweep of the knife about the vagina. There is no hemorrhage by this method of hysterectomy, and no contamination of pedicle and stumps, as in every other method, vaginal or abdominal.

In preparation of this paper I have used the terms "secured," "clamped or

ligated," etc., purposely, as there are several recognized methods of securing a vessel once the plan of approach and the technique of procedure are established. We may profitably consider the angiotribe, the thermo-clamp, the pressure clamp, and the ligature, the latter again embracing catgut, silk and the wire snare or *serre noed*.

The Angiotribe. This is a method of crushing the tissues of the pedicle under enormous pressure by means of lever and screw. The arteries and veins are obliterated, the whole being compressed into one mass of solid amorphous tissue by the tremendous pressure exerted. Its advantages are that it can be always used without depending upon electric current or other accessory, and is, moreover, unbreakable. There are no ligatures or other foreign bodies to slip or to be left as an irritant and to cause trouble at some future day. We all know the evil effects caused by heavy cable silk ligatures at times when they have been left in the abdomen. In fact, Dr. Morris, of New York, has said that it requires two surgeons to write history of buried ligatures and sutures: one who puts them in, and one, at some future day when occasion demands and the patient and former operator are far apart, who removes them. I have in the Woman's Hospital to-day a woman awaiting operation for the removal of pelvic mass that is piled about a cable silk ligature put on six years ago. Such results are avoided by the angiotribe, and its adherents and advocates claim for it that no case of secondary hemorrhage has occurred. I cannot speak from personal experience, as I have preference for another method to be later described.

The Electro-Thermo-Clamp. In this instrument we combine the crushing power of a strong clamp with the hardening and exsiccating power of the electric heating current. As in the case of the angiotribe, I have not used this instrument, but have witnessed its use in many cases. In the amputation of the appendix, and its meso-appendix; in the separation of vascular adhesions; in the severing of pedicled tumors, etc., this instrument has done within my knowledge good work, and I expect in future to find use for this and for the last described. As in the case of the angiotribe, no foreign body is left and the stump is in the best possible condition for absorption, at least theoretically. The instrument is a valuable one.

Pressure Clamps. This is an old and ever-valuable means of securing a bleeding vessel and needs no explanation from me. I will only say that occasions will arise, at rare intervals it is true, when it becomes necessary to clamp a vessel and leave the clamp in place for twenty-four or thirty-six or even forty-eight hours. The very heavy clamps are no longer used, and we find the slender, strong clamp the best. Half a dozen or more should be at hand in every case of tumor removal, to be used in case of emergency.

The Serre Noed or Snare. The practice of throwing a wire about the base or pedicle of a tumor, attaching a *serre noed* and screw and constricting the pedicle until hemorrhage is impossible, has been known since the beginning of surgery. It is still, with the modern improvements in instrument and wire material, a valuable agent, and I rarely attempt the removal of a tumor without having such an instrument at hand.

I use it less each year, as I became expert in analyzing the blood supply of the tumor and securing it in advance of my work. I have still had occasion once this year to employ it and I know in that case it saved life. The objections to its use are:

1. The prolonged convalescence occasioned by the slow separation of the stump.

2. The formation of sinuses and fistulæ.

3. The pain of subsequent dressings and pressure of pins, etc.

Ligatures. In my opinion this is the best method yet devised for control of bleeding vessel or one that is to be controlled prior to severance. I will not attempt here to settle the old war between the advocates of silk and catgut as ligature materials, except to say that personally I always use a well-selected, well-prepared catgut that has been chromicized to last ten days or more for pedicle work in the pelvis. It is freely absorbed. It is always sterile. It is flexible and easily tied. It does not make a foreign body. It can be applied where no form of angiotribe or thermo-clamp can be applied. It is as strong as silk and as flexible, with none of the disadvantages of the latter.

I use in my best work the Van Horn catgut, prepared by Van Horn & Co., of New York. When I prepare it myself I do so as follows: I select strong, flexible gut of good color and new manufactured and soak it in a four per cent. aqueous solution of formalin for forty-eight hours. If it is desired to make it last ten days I add fifteen to twenty grains of potassium bichromate to each pint of solution. The formalin is washed out by placing the gut in a bowl and allowing the water to enter the bowl from the bottom and overflow. The water is left running for fourteen to twenty-four hours.

The gut is now rolled up in small bundles and wrapped in gauze and boiled for fifteen minutes. It is then laid in alcohol for one day to remove the water and stored in absolute alcohol.

Clean surgery is necessary and an accurate knowledge of pathological anatomy as applied to the vessels of the pelvis. A cool head and a strong steady hand must pick out the sources of blood supply and ligate in advance of cutting. A second ligature should be put on the stump of important vessels after the tissues have retracted from the cutting. By this means hemorrhage is controlled and avoided. The clamp and wire will save us in case of accident.

No. 322 Rialto Building.

THE ETIOLOGY OF SCARLATINA.

By F. L. CLASS, M. D., of Huron, South Dakota.

The motive prompting this paper is the finding of a characteristic micro-organism constantly present in a number of cases of scarlatina. This microbe was first described by W. J. Class, of Chicago, in a paper read before the Chicago Medical Society, March, 1899. Prior to this efforts were made by various investigators, some of the more notable being made by Klein, Edington, Crajowski and Klebs. Klein described a streptococcus as the causative factor, which is still accepted by a considerable number of physicians. Edington described a bacillus. Crajowski a small diplococcus; but none of these observers produced by animal experiments with their respective microbe a disease whose symptoms resembled scarlet fever as found in the human subject.

The germ mentioned at the beginning of my paper is a diplococcus which has a tendency to change its form. It usually appears as a large gonococcus in form, resembling more this form of a diplococcus than the pneumococcus, being

somewhat more circular than oval in outline. When making cultures it will often appear as a tetrad; in this state the microbe is probably in the act of division; it occurs when the specimen is especially active and virulent. In old cultures very large cocci are formed, these by their division form smaller organisms which do not show the type of diplococci during their early existence. Very rarely they arrange themselves in the form of streptococci. On culture media inoculated with the blood of a scarlatina patient, the germ will grow as a diplococcus. It has no capsule, spores or flagelle, and is non-motile. The polymorphous character of the diplococcus scarlatina has been a misleading feature to many observers. By transplantation, the germ changing its form and size, these observers were impressed with the idea that they had a number of different organisms before them. The fault in these cases certainly lay not with the germ, but was due to the superficial and careless manner in which these men carried out their observations.

The fact that inoculations made with the germ at any period of its varied morphology is invariably followed by a group of symptoms identical with scarlatina, and that the germ has absolutely and perfectly fulfilled Koch's law, proves beyond a doubt that it is the causative factor of scarlet fever.

This germ is found present in the throat, scales and blood of patients suffering from scarlet fever.

In the process of staining most stains can be used. If the culture is fresh it will not stain deeply, as a rule, especially if prepared from the scales. It will sometimes happen that a specimen prepared from a culture taken from a typical case of scarlatina will apparently be devoid of the diplococcus scarlatina, but upon very careful observation the faint outline of the germ can be recognized. This peculiar characteristic has also misled a number of observers. As the germ grows older its affinity for stains increases; it then stains most beautifully, especially with a watery solution of methylene blue or carbolfuchsin. The cultures prepared from throat specimens will, as a rule, stain pretty well, although occasionally they will not take the stain; then the presence of the microbe can only be recognized by its very indistinct outline, but if further transplantations are made, the germ thereby growing older, it stains quite readily, as already stated. The culture medium upon which the diplococcus scarlatina forms the best growth consists of glycerine-agar—agar to which five per cent. of black garden earth has been added. This medium is original with the discoverer of the germ. Upon inoculating with the scales of a scarlet fever patient, after forty-eight hours to perhaps one week, during which time the tube has to be kept in an incubator, at a temperature of about 35° C., small grayish, semi-transparent colonies appear which are at first isolated but later coalesce. Upon this medium it grows as a large diplococcus. Another culture medium is blood-serum, but on this it will not grow as freely as on the one above mentioned. In glycerine-agar it grows rather feebly; on gelatine primarily it will not grow. In milk the germ multiplies very rapidly and retains its virulency to a very marked degree without producing any apparent changes in this fluid. This explains why cases of scarlatina have been traced directly to milk as the infection carrier, while in fact it was also the medium in which it retained its virulency and multiplied. Growths produced from blood which is drawn very early in the disease are quite profuse; as the disease advances and cultures are made from the blood of the patient from day to day the growth becomes gradually less in amount, so that at the close of the

disease it is so meager as to be almost non-perceptible. This phenomenon may be explained on the antitoxine theory. The antitoxic principle, which is elaborated during the course of the disease and contained in the serum of the blood, has an inhibitory action on the microbe. This fact has induced Class to make some careful experimental investigations. For this purpose he used white swine, which are quite susceptible to the disease under consideration. These animals were first made immune by injecting gradually increased doses of a filtered culture of the *diplococcus scarlatina*. When no further reaction to the poison or toxin contained in the filtered cultures appeared, blood was drawn from the animals, and the serum which contained the antitoxic principle separated from the corpuscular elements. Such an animal having been rendered immune by reason of the antitoxin which was generated, would show absolutely no reaction upon the further injection of the *diplococcus scarlatina*. Animals that were not protected by a previous attack of scarlatina were then given an injection of anti-scarlatinal serum, together with *diplococcus scarlatina*. Some of these showed a slight illness which was evanescent in character, while others escaped entirely. This proves without doubt that it is possible to make an antitoxin against scarlet fever.

In order to obtain positive results in animal experiments it is necessary to observe the following rules:

1. The culture to be injected into the animal must be glutinous; that is, when some is taken up with a platinum needle it must pull out in strings.
2. The injection must be made into the circulatory system, preferably into the ear veins. In cases where the injections were made into the skin the results were invariably negative.
3. The culture must be fresh and taken from a virulent case in order to produce positive results.

In cases where injections were made into the veins, a rash invariably follows. It was probably produced by the plugging of the smaller capillaries in the skin by *diplococcus scarlatina*. When injections were made into the abdominal cavity of the animal illness followed, and sometimes death; but the rash was not typical. The organs of the animals showed changes characteristic of scarlatina. I shall not go into detail about the changes found post-mortem in animals injected with the *diplococcus scarlatina*. These changes were described by Prof. R. E. Le Count, of Rush Medical College, in a paper read before the Chicago Pathological Society. It is sufficient for our purpose to state that they were identical with those found in human scarlet fever, thus adding another link to the chain of evidence that goes to prove that this germ is the true cause of scarlet fever.

Baginski, of Berlin, read a paper last July in which he described an organism like the one described by Class two years ago, claiming originality, but he later acknowledged that his germ was probably the same.

Gradwohl, of St. Louis, who made a careful investigation of this germ, corroborated the findings of Class. Gradwohl demonstrated the presence of the *diplococcus scarlatina* in seven consecutive cases of scarlet fever. Jaques, of Chicago, without single exception, found the germ present in a great number of cases. Page, of Boston, also reports having discovered the microbe in a number of cases. It has also been found by other competent observers who have not as yet published their results. Class bases the specificity of his germ on having

found it present in three hundred consecutive cases of scarlet fever prior to December, 1899, when he made his announcement before the Chicago Pediatric Society, but since then he has continued to verify this conclusion by finding it invariably present in a still greater number of cases.

I will now briefly describe a few cases in which I have been able to demonstrate the germ just described:

CASE I.—F. F., female, age three years, seen January 30, 1901. Initial symptom of vomiting; strawberry tongue; temperature, 104.2° F.; pulse, 130; scarlet rash especially marked on chest and arms; glands on one side of neck enlarged; temperature kept up for about seven days; no albuminuria; desquamation began about the tenth day; recovery. Culture taken from throat at first visit, this was examined twenty hours later and showed the diplococcus scarlatina present in large numbers.

CASE II.—B. F., male, aged nine months. Seen February 8, 1901. Initial symptoms: Temperature, 103° F.; pulse, 135; rash plainly visible except from the knees down; tonsils and pharyngeal vault decidedly reddened; case ran a normal course. Culture taken from throat showed a glutinous growth, examination of which proved the culture to be almost pure diplococcus scarlatina.

CASE III.—F. F., male, aged six years, brother of case two. Seen January 30, 1901. The disease had set in with vomiting; temperature, 103° F.; pulse, 128; strawberry tongue; throat symptoms quite severe and later in the disease the glands in neck very much enlarged; rash appearing on second day, case ran a protracted course, glands in neck remaining enlarged for over two months. Culture taken from throat when first seen showed a rather abundant growth of large diplococcus scarlatina.

CASE IV.—J. S., female, aged five years, seen May 29, 1899. When called the rash was fully developed covering the back, it was miliary in form; quite severe throat symptoms; strawberry tongue; temperature, 103.4° F.; pulse, 138; course of disease normal and desquamation set in about the ninth day, which was quite profuse. Culture from throat and scales showed diplococcus scarlatina.

CASE V.—L. S., female, aged two years, seen May 29, 1899. In this case the rash was also fully developed when first seen, and was of a more decided miliary character than the above case, the two children being sisters; strawberry tongue; throat congested and red; tonsils enlarged; temperature, 104° F.; pulse, 140; ran a usual course with desquamation, which was also quite profuse. Culture taken from throat showed a profuse growth of diplococcus scarlatina, together with some staphylococci and streptococci.

CASE VI.—J. V., male, aged six years, seen July 24, 1899. Patient was taken sick the day before with nausea, headache and fever. When seen had temperature of 103° F., bright red rash on chest and extremities, throat congested and small grayish-white patches on tonsils, some enlargement of cervical glands; the case ran a normal course and desquamation set in about the ninth day. Culture was taken from throat on second day of disease. The examination of same showed an almost pure growth of diplococcus scarlatina.

SPECIAL ARTICLE.

THE MEDICAL PROFESSION AS CONTRIBUTORS TO GENERAL LITERATURE.

BY GEO. R. HIGHSMITH, M. D., of Carrollton, Missouri.

What the medical profession has done for general literature would not fill many volumes, but civilization is indebted to physicians for contributions that exhibit fertility of talent, fullness of resources and extent of industry that command wide-spread admiration.

It may be said that the best contributions came from those who had withdrawn from the exacting duties of active practice, and to a certain extent this is true. To men of genius who hold out the promise of higher fruition in other fields of labor we are ready to give the parting benediction. We can well afford to surrender such men for the sake of a larger liberty and wider amplitude, if thereby we can accomplish the greater good to the greater number.

What Rabelais, the greatest of French humorists, might have accomplished had he continued his practice at Montpellier, may be hypothecated from his editorship of the works of Hippocrates and Galen, and his success as a lecturer. But we cannot forget that when he found in satirical romance a more congenial field, he left, by way of atonement, one of the world's masterpieces of travesty—the grotesque history of Gargantua and Pantagruel.

Nor do we forget that if Schiller exhibited impatience, amounting to insubordination, under the restraint of his duties as military surgeon at Stuttgart, and gave up his position when he needed its pay, it was eventually to become the greatest tragic poet Germany has produced. It was to leave us "Wallestein" and "William Tell" and the "Song of the Bell."

If Thomas Henry Huxley showed a similar restlessness as a surgeon in the English navy, and not only gave up his position to follow his bent, but afterward resigned the Hunterian Chair in the Royal College of Surgeons in order to devote his entire time to the advancement of ethnology, zoology and geology, what a lasting gain it has been to science!

If John Brown found loving companionship in "Rab and His Friends," so have we all.

If Charles Lever found the drudgery of a medical practice not to his taste, he made up for its relinquishment a thousand-fold by the sparkle and dash of his rollicking stories.

If Conan Doyle virtually abandoned the practice of medicine after ten years' experience, it was because he had received greater recognition as the creator of "Sherlock Holmes."

If, after receiving his degree in medicine, J. G. Holland found the practice not to his liking, it was to find his way to the hearts of two continents in "Bitter Sweet," "Katrina," "Gold Foil," and "The Story of Seven Oaks."

If Joseph Rodman Drake, who died of consumption at the age of twenty-five years, found that ill health would not permit him to continue in professional work, he has left us "The Culprit Fay" and "The American Flag."

If Oliver Goldsmith, though fortified with the investiture of Padua, the professional wig, velvet coat and gold-headed cane, was a dismal failure in practice from start to finish, that failure meant for posterity an inheritance such as the "Vicar of Wakefield," "The Deserted Village," "She Stoops to Conquer," etc.

Dr. Asa Gray relinquished the practice of medicine to become the "Father of American Botany."

I could multiply characters of this kind into a long list, but prefer to devote the principal part of this article to those who have made the practice of the healing art their chief occupation.

Although these United States have a greater number of medical men in proportion to the population than any other country in the world, our profession is not popularly regarded as particularly well educated. While, as in other professions, there is a large percentage who never rise above mediocrity, and of whom it may be said,

"A primrose by the river's brim
A yellow primrose was to him,
And it was nothing more,"

I hope to be able to show by the number of our craft who have cultivated literature that the medical profession is, in this respect, entitled to somewhat distinguished consideration. In Europe, for many years, many medical men have been known to posterity almost wholly by their literary efforts. As far back as the tenth century we find, in Moorish Spain, a celebrated Hebrew physician distinguished as a poet. His name was Juda Ha Levi. A translation of a quatrain from one of his poems shows his delicate work:

"Love came, I took him on my knee—
He stood tiptoe mine eyes to see;
He kissed my eyes. Could falser be?
His mirrored self he kissed, not me."

It was not until the middle of the seventeenth century, when the clerical element was divorced from medicine, that the medical profession began to hold a place in general literature. Even later than this one is struck by the frequency in which the study of theology is referred to as preliminary to the study of medicine. Many physicians who afterward became famous as medical practitioners were originally intended for the Church.

A study of the times during the reign of Charles II., of England, will throw some light upon the reasons for these conditions. The reign of Charles II. while it was a period of high civilization for that age, was noted for infidelity. Unbelief in religion went hand in hand with excesses of all kinds. The clergy were in ill repute. Since the fall of the Commonwealth the moral pendulum had swung to the other extreme.

About this time the so-called "wits" began to be the fashion. A man was hardly thought worthy of consideration who made no pretensions to wit; but if he had a reputation as a wit he could be a drunkard, gambler, libertine, or all combined, without losing his social standing in the court circles at Whitehall. In England clubs and coffee-houses were first inaugurated, each of which had its coterie of wits, and each its physician. Twice fortunate was the member who could play the wit and the doctor both. I propose to notice briefly a few characters whose names have been handed down to us from that period.

Sir Thomas Browne, 1605-1682, was the most learned physician and the most prominent literary man of his time. He took the degree B. A. at Broadgate Hall, Oxford, in 1626, the degree M. A. in 1629, and the degree M. D. at Leyden, in 1633.

In 1642 he published "*Religio Medici*," or "*The Religion of a Physician*." Its success was very great and the author at once became celebrated as a man of letters. In 1646 he published "*Pseudodoxia Epidemica*," or "*Enquiries into Vulgar Errors*." In 1658 appeared "*Urn Burial*" and "*The Garden of Cyrus*." His form of thought is peculiar, and his style unique, rich with a lavish use of metaphor and allegory. "*His 'Religio Medici' is considered his best work; his 'Vulgar Errors' shows great research; but the whole strength of his genius and the wonderful charm of his style are to be found in 'Urn Burial,' the concluding chapter of which, for richness of imagery and majestic pomp of diction, can hardly be paralleled in the English language, unless it may be in some of the sublimer passages of Milton's prose. He was knighted by Charles II. in 1671.*"

Walter Charlton, 1619-1707, was physician to Charles II. and President of the College of Physicians, London. He was the author of "*A Brief Discourse on the Different Wits of Men*," in which he attributes the variety of talent among men to the difference in the form, size and quality of their brains. He was a writer on theology, zoology, physics and antiquities. He translated the "*Morals of Epicurus*."

Henry Vaughan, 1621-1693, was born in Wales, but studied medicine and practiced for the most part in London. Before he began the study of medicine he published a volume of poetry. He began to practice at twenty-eight and continued as long as he lived. He wrote "*Mount of Olives*," a mystic prose work. He is best known, however, as the author of the poems, "*The Retreat*," "*The World*" and "*Beyond the Vale*."

Sir Richard Blackmore, 1650-1729, was educated at Westminster and Oxford. He graduated in medicine at Padua and settled for practice in London. In 1697 he was chosen one of King William's physicians. He had a passion for writing epics, no fewer than seven being published between 1695 and 1723; "*Prince Arthur*," in ten books, "*King Arthur*" in twelve, "*Eliza*" in ten, "*Creation*" in seven, "*Redemption*" in six, "*Nature of Man*" in three, and "*Alfred*" in twelve. His "*Creation*" appeared in "*Johnson's British Poets*." Addison and Johnson praised him highly, Johnson saying that his name would be transmitted to posterity as the "*first favorite of the English muse*."

Sir Samuel Garth, 1670-1718, was a man of great wealth and learning. He became a member of the College of Physicians, London, in 1691. He was the first physician of prominence to advocate the establishment of free dispensaries for the poor. For this he was assailed by the apothecaries and by his own narrow-minded brethren. In turn he ridiculed them so mercilessly in his mock-heroic poem, "*The Dispensary*," that it was the talk and enjoyment of the town for months, passing through three editions the first year. He published "*Claremont*," a moral epistle in verse. He was a very genial character; "*Well natured Garth*" Pope called him. Pope also said that "*he was as good a Christian as any man living without knowing it*." He was the intimate friend of Swift and Addison. It was said of Garth that "*his practice was not commensurate with his great abilities, and that his society was courted by the fashionable set, not because of medical eminence, but because of distinction as a wit and poet*." Not-

withstanding, however, handsome compliments were paid to his professional attainments. He was selected in 1697 to deliver the Harveian Oration, in which he pronounced a eulogy on King William which led to his election to membership in the famous "Kitkat" Club. It was Garth who extemporized most of the verses inscribed on the drinking cups of the Kitkat Club, and which I am told are preserved to this day.

Dr. Garth was the principal physician of the Whigs and physician in ordinary to the king. He followed the Duke of Marlborough through all the vicissitudes of his career. He was knighted by George I., in 1714, with the Duke of Marlborough's sword. He delivered the oration at the funeral of the poet Dryden.

Dr. John Arbuthnot, 1667-1735, was the bright particular star of that splendid constellation, the "Scriblerus Club." The first book of "The Memoirs of Martin Scriblerus," published in Pope's works, is undoubtedly the work of Arbuthnot. It is an admirable combination of wit and learning, and has been said to be the finest specimen of sarcastic humor in the English language.

In 1705, at the request of Queen Anne, he was chosen physician extraordinary, and four years later was made royal physician in ordinary. He was now in the very center of the literary society of the time, and his great talent, massive learning and brilliant wit enabled him to take a prominent place. He was on intimate terms with Pope, Gay, Swift and Parnell, and quickly became one of the foremost literary men of the Tory party. In 1712 appeared the celebrated political allegory called "The History of John Bull." It was from this that the term "John Bull," as applied to the English nation, originated. When "The History of John Bull" first appeared it was generally ascribed to Swift, but passages in Swift's own letters make it quite certain that Arbuthnot was the sole author.

Dr. Samuel Johnson, speaking of the writers that graced the reign of Queen Anne, said: "I think Arbuthnot the first man among them. He was the most universal genius, being an excellent physician, a man of deep learning, and a man of much humor." Much of his success was due to his humanity, which Swift declares was equal to his wit. But Swift furnishes a still better index in one of his own poems, in which he laments that he is,

"Far from his kind Arbuthnot's aid,
Who knows his art but not his trade."

Dr. Arbuthnot attained great eminence in his profession, and in 1727 delivered the Harveian Oration. Dr. Arbuthnot's "Medical Notes" were collected and republished about three years ago.

During the first half of the eighteenth century physicians began, more and more, to attach themselves to political parties, or to court the favor of men of rank. The Whig and Tory parties each had its physician as well as its club and coffee-house. By the middle of the eighteenth century most physicians and surgeons of the better class had either assumed offices and positions in which they were supported by the state, or were settled by their noble patrons in permanent residences. Some of them were supplied with large libraries, either by their patrons or the government, and the most of them enjoyed moderate prosperity. Intellect had marched forward with gigantic strides; among writers wit had, in a measure, given place to satire.

Dr. John Armstrong and Dr. Mark Akenside held the boards as contemporaries of Oliver Goldsmith, Tobias Smollett, Horace Walpole, Richard Brinsley Sheridan, David Garrick, Samuel Johnson, *et id genus omne*. Clubs and coffee-houses were still a prominent feature of scientific and literary circles, but the character of the company had changed. There was a mingling of aristocracy with talent, the leveling of ranks by the force of intellect, the assembling, not only of all the celebrities that Europe could boast, but of all from the whole civilized world that could enhance private enjoyment. Company was not selected for rank, but for peculiar merit or acquirement; pomp and wealth were made subsidiary to the true luxury of intellectual conversation. The famous literary club of which Johnson was the autocrat was at its zenith.

Dr. John Armstrong, 1705-1770, received degree of M. D. at Edinburgh University and settled for practice in London. In 1746 he was appointed one of the physicians to the hospital behind Buckingham House, and in 1760 physician to the army in Germany, a position which he held until the peace of 1763. His first publication was "An Essay for Abridging the Study of Physic," and was published in 1755. It was a satire on the ignorance of the apothecaries and medical men of his day. Two years later he published "The Economy of Love," the indecency of which very much damaged his professional practice. In 1774 appeared his "Art of Preserving Health," a didactic poem upon which his reputation as a literary character rests. He also published about the same time a volume of "Miscellanies," which displayed considerable humor and powers of observation.

Mark Akenside, 1731-1770, entered the Theological School of Edinburgh University in his nineteenth year, but, like many young men of his time, changed his mind and transferred from the theological to the medical department. His reputation for oratory was so pre-eminent that Robinson, the historian, used to attend a debating society of which Akenside was a member to hear his speeches.

In 1743 the publisher, Dodsley, came to Pope with a bundle of manuscript for his opinion, for which the writer wanted 120 pounds. After reading the manuscript, which was "Pleasures of the Imagination," the "Oracle of Twickenham" advised the publisher to "make no niggardly offer, as this was no everyday writer." In his twenty-third year, like Byron, he awoke to find himself famous. The same year that he graduated in medicine he became a literary celebrity. His contributions to medical literature were of a very high order. His inaugural thesis, describing the formation and growth of the human fetus, was characterized by originality and acute observation. He continued through life to alternate his contributions to medical science with additions to general literature. The fact that he was celebrated as a poet was not sufficient, as was said of Goldsmith, for the public to believe him incapable of practicing as a medical man. He attained considerable distinction as a practitioner, and received numerous appointments.

In 1754 he was elected a fellow of the College of Physicians; in 1755 he delivered the Gulstonian lectures; in 1756 he delivered the Croonian lectures; in 1759 he was chosen chief of St. Thomas Hospital; in 1760 he delivered the Harveian oration.

His fame as a poet is secure. Some of his minor poems are conspicuous for classical grace and charm of expression.

Notwithstanding the distinction he enjoyed, both as physician and man of letters, he possessed great personal vanity, which often brought him into ridicule. He furnished the original from which "The Doctor" in Smollett's "Perigrine Pickle" is drawn.

Passing to the last half of the eighteenth century and the first half of the nineteenth, we find a long list of physicians who have been active contributors to general literature.

Among the illustrious names of this period we mention Erasmus Darwin, grandfather of Charles; Henry Dearborne, David Ramsey—historian of the Revolution; Benjamin Rush, one of the signers of the Declaration of Independence, and a prolific writer both in medicine and general literature; Lemuel Hopkins, Samuel Latham Mitchell, mentioned by Stedman in his "Poets of America;" James Currie, editor of an edition of Burns, with "An Introductory Criticism, and an Essay on the Character and Condition of the Scottish Peasantry;" John Wolcot, Thomas Brown and James Gates Percival.

Erasmus Darwin, 1731–1802, physician, scientist, and poet, deserves to be noticed somewhat in detail. He took the degree M. D. at the University of Edinburgh, and settled as a physician at Litchfield, England, where he gained a large practice. While here, it is said, he did much to diminish drunkenness among the inhabitants. He is said to have been a good eater, but drank nothing but water.

He wrote: "The Temple of Nature," "The Shrine of Nature," and "The Botanic Garden." The second part of the latter, "The Loves of the Plants," furnished occasion for a clever caricature by Canning, "The Loves of the Triangles."

He is also the author of a scientific work, "Zoonomia," which contains a system of pathology and a treatise on generation, in which very nearly the same ideas are advanced as underlie the modern theory of evolution.

Erasmus Darwin says: "Would it be too bold to imagine that in the great length of time since the earth began to exist, perhaps millions of ages before the commencement of mankind, would it be too bold to imagine that all warm-blooded animals have arisen from the same living filament, which the great First Cause endued with animality, with the power of acquiring new parts, attended with new propensities, directed by irritations, sensations, volitions, and associations, and possessing the faculty of continuing to improve by its own inherent activity, and of delivering down these improvements to its posterity, worlds without end, . . . and that one and the same kind of living filament is and has been the cause of all organic life?"

May not Charles Darwin be more indebted to his illustrious grandfather, who did his thinking and writing as he journeyed from one patient to another, than many of us suppose? May not his love of nature, and his capacity for investigation, and the facility with which he classifies facts and formulates theories be due, in part at least, to hereditary transmission of genius? How much may Huxley, Tyndall, Spencer, Haeckel, Helmholtz, and other apostles of evolution, be indebted to this modest practitioner of medicine? When we take into consideration the poverty of the English language at that time, especially in scientific terms, how little difference exists between the above quotation from Erasmus Darwin and Tyndall's expression: "One single atom of protoplasm contains the power and potency of all things."

The poetical reputation of Darwin is as bright as the flowers that form the subject of his verse. Cowper praised his song for its rich embellishments, and said: "It was as strong as it was learned and sweet."

James Gates Percival, 1795-1856, was a native of Kensington, Connecticut. He graduated at Yale in 1815, at the head of his class. He taught school for a while, then studied medicine and located in Charleston, South Carolina. In 1824 he was appointed assistant surgeon in the United States Army, and was made professor of chemistry at the United States Military Academy. In 1822 he published "Prometheus" and "Clio;" in 1826 two volumes of poetry, and in 1843 his "Dream of a Day." His poetry shows delicacy of touch, fineness of feeling, and sweetness of diction.

Coming down to this day and generation we are overwhelmed by the wealth of material. There never has been a time in the history of the world when knowledge was so easily accessible and so eagerly sought after. The afternoon of the nineteenth century has been rich in discovery, invention, and history. If we pause to take an inventory we are bewildered with amazement! Compared with fifty years ago, achievements are beyond the dreams of the wildest fancy! The wave of no fairy godmother's wand could create such wonders! The miracles of yesterday are the commonplaces of to-day! We have hardly time to make a prophecy before it hastens to be fulfilled!

The medical profession has kept step with the march of progress. During the past fifty years, biology, embryology, and physiological chemistry have been newly created. We have watched the birth and growth to vigorous maturity of bacteriology; the word "microbe" has been added to the vocabulary, and "toxines" and "ptomaines" have been evolved from the hypothetical.

In an address delivered before the Alumni Association of Jefferson Medical College, Philadelphia, in April, 1891, Dr. Ross R. Bunting mentions the names of more than fifty graduates of "Jefferson" who have found time amid the exacting duties of active practice to indulge in literature, and have furnished contributions which entitle them to recognition in purely literary circles. About forty of them belong to the last five decades, many of them are yet living.

Dr. Elisha Kent Kane, 1820-1857, is the author of "The United States Grinnell Expedition in Search of Sir John Franklin During the Years 1850-1851," "Arctic Explorations," and "The Second Grinnell Expedition in Search of Sir John Franklin, 1853-1855."

Dr. Kane was singularly original both in thought and expression. Dr. Elder, his biographer, says: "In 1500 pages of matter he never makes a quotation to assist himself in expression, except one from Bunyan, and that is used for its allegorical effect as much as for its beauty and power." Poetry was a distinct element in his mental make-up and finds expression in the higher forms of prose. One instance of poetic-prose writing is shown in the following extract: "I am afraid to speak of some of these night scenes. I have trodden the deck and the floes when the light of the earth seemed suspended—its movements, its sounds, its coloring, its companionship—and as I looked on the radiant hemisphere circling above me, as if rendering worship to the unseen center of light, I have ejaculated in humility of spirit, 'Lord, what is man that Thou art mindful of him?' And then I have thought of the kindly world we have left, with its revolving sunshine and shadow, and the other stars that gladden it, with its

changes, and the hearts that warmed to us there, 'til I have lost myself in memory of those who were not; and they bore me back to the stars again."

Dr. Kane died at the age of thirty-seven. What a mind of such fertility might have accomplished had he lived to reach the allotted three-score and ten who can say?

Another prolific contributor to Arctic literature was Dr. Isaac Israel Hayes, 1833-1881. He published "An Arctic Boat Journey," "Cast Away in the Cold," "An Old Man's Story," "The Open Polar Sea," "The Land of Desolation," etc.

Dr. Oliver Wendell Holmes was beyond doubt the foremost contributor to general literature from the ranks of the medical profession during the past fifty years. He combined high scientific attainments with the greatest versatility and the rarest literary genius. He was equally at home among the "dry bones" of anatomy, within the glow of the crucible, or amid the revelations of the microscope. As a biographer, romancer, philosopher and poet he takes high rank.

At a banquet given to Dr. Holmes by the New York Academy of Medicine in 1883, Whitelaw Reid said in the course of his response to "The Press": "It is a rare compliment to your profession that, after all the wooing of the muses, Dr. Holmes still made medicine the business of his life, and thus gave up to Beacon street what was meant for mankind. If all his literary work is only the fruit of such leisure as could be snatched from an arduous employment, what might the world have had if the facts had been reversed—if literature had been his profession and medicine his recreation?"

Our Autocrat has shown how the anatomist in the lecture-room could trace the tortuous windings of the divisions of the trigeminus nerve, and then go home and pen such immortal verse as "The Living Temple" or "The Chambered Nautilus;" how he could descant, in his inimitable way, on the wonderful texture and the divine purpose of the ovarian stroma, and then, with an eye to the fitness of things, toss off in ringing measures, "God Bless Our Yankee Girls."

It would be easy to prepare a long list of those who, in addition to renown as ministers of the healing art, have acquired distinction in the congenial fields which are open to explorers in history, biography, criticism, poetry, drama and fiction.

Not that, as a rule, they have sought laurels and honors in this direction; but their success has served to prove the harmony and compatibility of their participation in medical literature with their contributions to general literature, to show that the allurements of the latter involve no disloyalty to professional duty and obligation, and to point out that the transient change from one to the other is not a change of work, but a transference from work to recreation—a call from labor to refreshment.

A fair review of the works of orators who on occasion could rise to the loftiest height of fervid eloquence; a superficial notice of the poetic legacies, the outgrowth of refined and brilliant imagination; a resume of the outflow of the extraordinary scholarship of a Charles D. Meigs, who was at home in the whole range of literature, science and art; a summary of the literary labors of that encyclopedist, Robley Dungleson, over and beyond his stupendous medical authorship—any of these would more than consume the time at our command. What busy men were they! How faithfully they served their day and genera-

tion! Their successors are adding to the accumulating stores of professional and general literature.

Among those who are now living I have time to mention but two, and they both hail from that great center of medical and literary culture, Philadelphia. They are Silas Weir Mitchell and Solomon Solis-Cohen.

Dr. Mitchell is one of the busiest and most successful of men, professionally, but has availed himself of every interval for work as essayist, novelist and poet, and his contributions are among the daintiest and most delightful in English literature. A competent critic says of his poetry: "Dr. Mitchell's poetry is full of the sincerest feeling, and the most brilliant imagings. He creates a character of man or woman; or paints a picture of brook, or trees and flowers, or mountain tarn; or describes the violet's scent, the daisy's dress, or the timid breeze's mild caress; and the man or woman who has sprung from the realms of his fancy, . . . and that he would exalt, becomes not only real, but of finer clay, of nobler spirit than ordinary mortals; his pictures of natural objects glow with sunset beauty and splendor, and are filled with warmth, tenderness, and the charm of autumnal afternoons."

Dr. Mitchell was known all over the civilized world as a distinguished physician and medical author before he contributed a line to general literature. He is now equally distinguished as essayist, novelist and poet.

Solomon Solis-Cohen is a young man, having graduated in medicine in 1883. He is a very busy practitioner, a frequent contributor to medical literature, the translator into English and editor of several works from French and German authors, besides being one of the lecturers in Jefferson Medical College. In addition to a great deal of original work, he has translated from the Hebrew many of the verses of the Jewish poets who flourished in Moorish Spain from the tenth to the fourteenth century.

Of his poem, "I Know That My Redeemer Liveth," Whittier spoke in terms of highest approval, and incorporated it into his "Songs of Three Centuries." It is the fervent protest of the student of nature against modern "Agnosticism." The false science which would deny to man the power to know his maker.

And now in conclusion: The medical profession is not only entitled to a conspicuous place in literature and science, by reason of original work and investigation, but has won such a position in general esteem as to attract the attention of professional literati. Some of the most lovely and most lovable characters introduced into recent fiction are doctors, viz.: Dr. Lydgate in "Middlemarch," Dr. Jekyll in "Dr. Jekyll and Mr. Hyde," and Dr. MacLure in "Beside the Bonnie Brier Bush."

Besides filling no inconsiderable niche in general literature, the fields of mental and moral sciences, chemistry, botany, geology, zoology, physiology and natural history have been especially enriched by contributions from physicians. The facts upon which Darwin's theory of evolution is based would be very meager indeed without contributions from the medical profession. The physician is a potent factor in any and every field in which he enters. I cannot refrain at this point from making a quotation from an address on the occasion of a banquet given to Dr. E. H. Gregory recently, in which Dr. A. M. Dockery, Governor of Missouri, responded to "The Physician as a Citizen." Governor Dockery said: "The physician in the discharge of the momentous duties of American citizenship

has never yet failed in the performance of duty. As a conservative, yet forceful factor in our political life, he is unsurpassed. . . . His relations to the people are so close and so confidential that, although he is not often classed as an office seeker, he exercises a most powerful influence in determining who shall hold office. . . . As a citizen he is enterprising, progressive and public-spirited. As a philanthropist he has no superior. . . . As a champion of education there is none more zealous. Sweeping the whole range of human endeavor, the physician, at every point, touches elbows with every cause which ennobles humanity and uplifts the human race."

That poetry and the natural sciences should be especially attractive to the physician is not to be wondered at when we remember that his professional work brings him face to face with nature. To him who is in love with his profession and has his eyes and ears and heart open, his occupation begets a love for blue skies, green fields and running brooks, gorgeous sunsets, mellow twilights and fair dawns, the song of birds, the hum of bees and the prattle of children ; in fact, the disposition to appreciate nature in all her phases—to find "songs in trees, sermons in stones, books in running brooks, and good in everything."

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EDITED BY

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OTHO F. BALL, M. D. Managing Editor.

COLLABORATORS:

MAX MICHAELIS, M. D.,
Docent of Internal Medicine, University of Berlin, Germany.

JULIUS NEUMANN, M. D.,
Docent of Obstetrics and Gynecology, University of Vienna, Austria.

FRANZ NEUGEBAUER, M. D.,
Professor; Director of the Evangelical Hospital, Warsaw, Russia.

JULIUS SCHNITZLER, M. D.,
Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,
Berlin, Germany.

Address all communications to the INTERSTATE MEDICAL JOURNAL, LINMAR BLDG., ST. LOUIS, MO.

EDITORIAL COMMENT.

THE RELATIONSHIP BETWEEN MALIGNANT TUMORS OF THE OVARIES AND OTHER ABDOMINAL ORGANS.

Almost all text-books state that malignant tumors of the ovaries are usually primary and but rarely secondary, viz., metastases, and that these primary tumors of the ovaries very frequently form metastases by involving first the peritoneum, next the stomach, liver or intestine. According to more recent researches these teachings require a radical modification. For about a year the reports of cases of carcinoma of the ovaries, which undoubtedly are but metastases of cancers primarily situated in other abdominal organs, have been decidedly on the increase. Cases of this nature are reported by E. Kraus, Lamparter, Sauter, Roemer and others, and reviews of these and other reports may be found in the department of Gynecology and Obstetrics of this issue. Schlagenhauser, in a paper published in *Monatschrift fuer Geb. und Gyn. Ergaenzungsheft*, 1902, adds eight more cases of this class, and submits the so far recorded seventy-nine cases to a careful consideration. His conclusions are not only of great interest from the standpoint of pathology, but are also of eminent practical importance. Most of these cases were observed and reported by gynecologists, and almost all the reports therefore advise, from a gynecologist's standpoint, that an operator who is called upon to extirpate malignant ovarian tumors must first of all make a careful search for a primary cancer in the stomach, gall-bladder or intestines.

Schlagenhauser shows that in these seventy-nine cases the primary carcinoma was situated in the stomach sixty-one times. The technique of the radical operation of gastric cancer has been steadily improved; the immediate results are now almost satisfactory; the operation is more and more frequently performed, and therefore we believe these new observations are of almost greater importance to the surgeon than to the gynecologist.

In view of the above the necessity arises that in every case of carcinoma of the stomach in the female, a careful vaginal examination be made before the advisability of a radical operation can be considered. Presence of enlarged, hard, nodular ovaries will suggest the possibility of metastasis; concomitant ascites will make the contamination probable; the proof that the ascitic fluid is of sanguinolent character will establish the diagnosis almost beyond doubt. Such a finding will, in the light of these new observations, mean an almost positive contraindication against radical operation. The mode of infection of the ovaries in cases of primary cancer of other abdominal organs has been established as follows: First the peritoneum is affected; from the peritoneum the cancer is transferred to the ovaries by direct contact infection; from the ovaries the cancer may spread by way of the lymphatics into the uterus, broad ligaments, and even tubes, as is for instance described by Roemer. From this it can be seen that even an extirpation of both ovaries concomitantly with the removal of the gastric cancer could not be considered a radical operation, on account of the infection of the peritoneum almost invariably found in these cases.

These new views as regards the relationship between malignant tumors of the ovaries and the stomach may furthermore be of practical value to the internist. It can be seen from many of the histories cited by Schlagenhauser and others, the ovarian metastases grow very fast, and thus may be more easily discovered than the slowly developing primary tumors. To the writer it seems probable that in certain cases of gastric cancer in the female the diagnosis could be established or confirmed by means of a gynecological examination.

The importance of these recent findings for the pathologist is evident. They have changed our views as regards the frequency of primary malignant tumors of the ovaries, and have established the relationship between certain malignant tumors of abdominal organs and malignant tumors of the ovaries as being primary tumors and metastases. Finally, they at last offer a more satisfactory explanation for the well-known fact that malignant ovarian tumors are found as a rule to be bilateral.

STAPHYLOCOCCI IN DISEASES OF THE SKIN.

There is no branch of medicine whose pathology is so difficult of elucidation as that of diseases of the skin. The science of dermatology is overburdened by a nomenclature which, unfortunately, often assists in confusion. Pathologic processes of the skin are not always fixed or definite in their appearances, the objective symptoms being subject to various changes induced by climate, intercurrent or accidental infection, trauma, dirt and other forms of irritation. Thus an apparent entity is often changed in some minor points by these various influences, when an adjective or two is added to its name or new string of terms is given it, and it appears in the guise of a new disease. The dermatologists are trained to

see, and from this acuteness of vision there arise many confusing and unnecessary adjectives.

Again, certain definite infections of the skin may present quite different objective phenomena, dependent upon the virulence of the special culture of the specific organism, the soil afforded by the skin, climate, season, etc. These facts have been instrumental to a certain degree in producing this confusing nomenclature. Yet we have a nomenclature by which the men working independently throughout the world understand each other fairly well, and even under these word-disguises processes similar in character are often recognized and properly placed.

The only hope for the future is through improved methods in bacteriology and histopathology, by the means of which a proper understanding of the various diseases can be established, with a nomenclature expressive of the true pathologic features.

To illustrate the almost bewildering state of these things which exists at present, at the last International Congress of Dermatology the question of the parasiticity of eczema was one of the subjects for discussion. In all of the papers upon this subject the various authors expressed their doubts as to what conditions should be included under this term, thereby forcing upon the congress the recognition of the necessity of discussing at the next meeting the question of what should be understood by the term eczema and what conditions should be included under it. It can readily be seen how useless it would be to search for the course of eczema, for example when so many probably different conditions are at present included under it. This class of so-called catarrhal diseases of the skin is especially difficult to classify, when merely studied from their objective clinical symptoms; and yet the difficulty is not materially lessened by an investigation of their histopathology or bacteriology with the present methods. Unna has made a great step in the right direction by his methods of selective staining, but his efforts to carry these ideas into bacteriology and by staining, culture media, etc., produce so many varieties of eczema cocci is not only confusing but certainly erroneous. When we deal with the staphylococci by means of artificial culture media, we must remember that minor differences in color, size and contour of the cocci and colonies are probably produced by slight varieties of artificial growth or media. This will obtain also upon the skin itself, as it is a media varying in reaction with the individual, the season, and his state of health. The researches of the essayists at the last congress peculiarly demonstrated this when they all reported finding several varieties of staphylococci in their search for the special cause of eczema.

Bacteriology of diseases of the skin is at present developmental. But to unfathom the role of the staphylococci is a most important step in the right direction.

THE PASSING OF THE MASTERS.

There can be no gainsaying that the present enviable position of medicine in the domain of science is due largely to the untiring and unselfish efforts of the old school of German physicians now passing away. They have accomplished a noble work, and are leaving behind them monuments that time can never cause to crumble. They are bequeathing to posterity the most important links that have yet been added to the chain whose far-off end is to see medicine an exact

science. The most exalted function of man is to contribute to the well-being of those yet unborn—the coming men. No matter how small or insignificant such a contribution may seem in the realm of science, like the seed in the earth, it is sure to grow when time and circumstances are propitious. All things great have had small beginnings. The old masters were thoroughly awake to this fact, and were content to give their very best efforts to the rounding out and completion of one small link in that endless chain. Some have lived to see the full fruition of their labors, others have gone to eternal rest with their labors but half completed. In these restless, “nervous” times we need their lessons and their inspiration. In the desire to accomplish large things quickly, we are apt to be superficial; beginning with false hypotheses, we reach erroneous conclusions. Under these circumstances we are not only not contributing to posterity, but are placing upon the shoulders of future generations the unnecessary burden of disproving groundless theories. One needs but glance hastily through the pages of our medical journals, local and foreign, to learn the tendencies of the times.

We are rushing to print and to fame, regardless of results. We are not following in this the teachings of those who have taught us the fundamental principles of medicine. For the time being we must console ourselves with the fact that “fads” are but short-lived, and that reaction must follow. Speed the time when once more all observations in medicine will be based upon a knowledge of its fundamental principles, upon concentration of thought, mature deliberation, and profound regard for the truth of every statement handed down to posterity through the agency of medical archives.

Among those who have given us examples worth emulating, who will never die in the memories of men, may be mentioned Virchow, Kussmaul, von Leyden, Koenig. The first two having attained their eightieth year and the last two their seventieth, have recently been honored by their colleagues in a manner befitting their high positions in the world of science. It is indeed gratifying to know that Prof. Virchow is recovering nicely from the recent injury sustained while getting off a street car, and that his remaining days will be spent in usefulness to his profession. May they be many.

AN INTERNATIONAL TUBERCULOSIS CONGRESS AT THE WORLD'S FAIR.

It has been suggested—and the suggestion seems a timely one—that a movement be started looking to the convening of an international congress for the consideration of tuberculosis at St. Louis during the World's Fair. This subject has been receiving marked attention from the various nations, and each has considered the best plans for combating the disease within its boundaries. It would be very appropriate, therefore, for the various countries interested to look to a concerted action. In fact, it is only through international action that the desired results can be attained in stamping out such a wide-spread disease. The king of England has recently offered a prize of \$4,000 for the best plans presented of a sanatorium that will accommodate one hundred patients. These plans may be presented by a physician, or by a physician and architect working in unison. It is hoped through this means to erect an institution combining all of the best ideas, and which may serve as a model for all Britain, and even the world. Similar interest has been manifested in other countries. It would be

well indeed if concerted action on the part of the various nations could result in the crystallization of all the rational ideas into one universal plan of action.

MEDICAL CHARLATANS HERE AND ABROAD.

It was with much amusement that we read in a recent number of the journal of the *American Medical Association* a reprint of a circular-letter to American physicians from the Denver School of Osteopathy. A ten-months' course in the Principles and Practice of Osteopathy is offered for a fee of \$200. The course is to extend over ten months, though it may be shortened if the student shows especial aptitude. As a bit of impudence, this invitation to physicians to sit at the feet of charlatans has, we believe, never been surpassed; it is not, however, surprising, considering the recognition, both osteopaths and christian scientists have obtained from many of our State governments. They manage these gentry better in Germany, as the two following examples show:

About the middle of March one Ferdinand Schumacher was tried in the criminal court at Darmstadt for obtaining money under false pretenses. He was the proprietor of an institute in which "nervous, skin, sexual and female diseases" were treated ostensibly on the "no cure, no pay" plan. While his consultation fees were nominal, he charged from \$5 to \$8 for medicine furnished his patients. In the nineties he had been sentenced to two and a half years in the penitentiary for similar practices, which, however, he resumed soon after his release. He was again arrested last year, forfeited a bond of over \$4,000 by fleeing to this country. From here he went to Switzerland, whence he was extradited and taken back to Germany. Here he was sentenced to four years in the penitentiary, \$1,100 fine and ten years' loss of civil rights.

A "magnetopath," Karl Offermann, had been called in to treat a servant girl suffering with acute articular rheumatism. He had her come to his office in a cab on four occasions, and there treated her by stroking the knees with his hand. Instead of improving, the rheumatism grew worse. The girl thereupon went to a hospital, and was discharged as cured ten days later. Offermann was cited before the Cologne criminal court to answer to a charge of malpractice. It was shown that the girl's condition had been rendered worse by her cab-rides and by the manipulations employed by the defendant. The latter was fined \$100, and while he has appealed, there is every prospect of the judgment being affirmed in the higher courts. The irregular practitioner's life, at least in Germany, is not a happy one.

THE EXTERMINATION OF RATS.

Now that the part played by rats in spreading the plague has been established beyond dispute, many cities, especially seaports, are endeavoring to exterminate the entire race. At Copenhagen a "Committee for the Rational Extermination of Rats" has been formed which is trying to procure international co-operation for the destruction of these rodents. Something has already been accomplished by the committee. In addition to the establishment of an exposition of apparatus and methods for destroying rats on a large scale, the committee has offered a reward of about three cents for every rat destroyed. As a result, over one hundred thousand have been killed in Copenhagen during the past

eighteen months. At Stockholm, where the same system is in vogue, a still greater number has been killed within the year. The only objection to this method of ridding a town of rats is that the survivors, finding the competition for food less keen on account of the diminution in their numbers, would probably propagate their species with a correspondingly greater rapidity, not to speak of the temptation offered the populace to secretly establish rat-farms.

MYOPIA IN THE BRITISH ARMY.

The *Bulletin de Therapeutique* relates, not without glee, the result of an inquiry made by Dr. Grimshaw upon the prevalence of myopia among the British soldiers in South Africa. It seems that the War Office furnishes its soldiers with false teeth, but in spite of the prevalence of myopia in the army, forbids them to wear glasses. This may perhaps explain the disproportion between the losses sustained by the English and those sustained by the Boers. One soldier who had been on the firing line all day is said to have replied to a question regarding his acuteness of vision: "During the entire battle I did not see a single Boer. Yes, sir; we have been shooting at the kopjes all day on the chance of hitting a Boer or two." If this, as Dr. Grimshaw says, is not an exceptional case, we need not be surprised at the duration of the struggle just ended.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

Sugar, as Such, in the Diet of Dyspeptics.—MORGAN (*Archiv fuer Verdauungs-Krankheiten*, vol. viii, pt. 1 and 2, 1902) conducted a series of experiments with reference to the influence of sugar upon gastric digestion. The first series was carried out upon healthy, strong laborers; the second upon individuals suffering from a marked hyperchlorhydria; the third upon those afflicted with chronic gastritis; the fourth upon an obstinate case of achylia gastrica.

It was found that large quantities of sugar in the diet of both sick and healthy individuals greatly influenced the secretory function of the stomach, reducing the quantity of both acids and ferments.

In cases of hyperchlorhydria such a diet diminished the acid production in about the same proportion as in a healthy stomach.

In all of the cases investigated, excepting those of achylia gastrica and chronic gastritis, it was possible to increase or diminish the production of acid in the stomach by adding to or withdrawing sugar from the diet. In the first case, the negative action upon the glands was probably attributable to atrophy; in the last to the cleansing and bactericidal action of sugar, when added to the daily diet in large quantities. The sugar diet caused a decrease in the activity of the ferments in all excepting the cases of gastritis chronica. It was also found that the proteolytic function was also influenced. Propeptones were produced in larger quantities than the peptones, under conditions, however, which resulted in a weakening of the gastric functions.

The subjective symptoms of the patients showed conclusively that sugar in sufficient quantity interferes with gastric fermentation, and when administered, it prevented the further eructation of gases. Patients suffering from hyperchlorhydria were promptly relieved of the pyrosis which so often accompanies it. The influence upon the appetite was inconstant and permitted of no definite conclusions. Its action upon the bowels, however, was well defined in every case. The peristalsis of the intestines was increased, the stools were increased in quantity, and their consistency was always soft. The urine was invariably increased and with it the urea. This leads to the conclusion that individuals with a uric acid diathesis should avoid sweet foods.

Diabetes Insipidus and Paralysis of the Bladder.—POSNER (*Berliner Klinische Wochenschrift*, No. 19, 1902) reports a case of a diabetes insipidus in which there occurred a very unusual complication. This patient had been passing an unusually large amount of urine for over six years. There developed ultimately symptoms of indigestion and pressure in the abdomen. It was found upon investigation that the lower abdomen was greatly enlarged, and the enlargement seemed to correspond to the bladder. The patient was asked to empty the bladder and passed 250 cc. of urine. A catheter was introduced and 2200 cc. removed immediately afterwards. Frequent determinations of the twenty-four-hour quantity showed that from 4–6 liters were excreted daily. There was absolutely no obstruction in the urethra; the prostate was of normal size, and a cystoscopic examination showed the bladder mucous membrane to be perfectly normal. A thorough examination of the central nervous system excluded the possibility of

the cause lying there. Catheterization was now carried out daily, and each time an exceedingly large quantity of residual urine was removed.

With the exception of the exceedingly low specific gravity of the urine, 1002-1004, nothing abnormal could be found, either upon microscopical or chemical examination.

Massage, faradization and medication all failed to materially reduce the quantity. With large doses of potassium iodide, however, the quantity could sometimes be reduced to 2400 cc. for a short period.

As to the probable cause of the paralysis of the bladder, there are two possibilities. This may have been the result of the polyuria, which gradually brought about an atonic condition of the bladder and complete loss of muscular force through increased tension. On the other hand, both the diabetes insipidus and the bladder paralysis may have been due to the same cause, viz., a lesion in the central nervous system. Local disturbances have often been found in diabetes, and in animals in which glycosuria had been experimentally produced by injury to the medulla. Hemiplegia, facial paralysis, trigeminus involvement, etc., have often been observed. Bladder disturbances, however, have not been reported.

Acute Pyopneumothorax in a Case of Incarcerated Diaphragmatic Hernia.—STRUPPLER (*Muenchener Medicinische Wochenschrift*, No. 15, 1902).—It is a well-known fact that certain pathological conditions in the abdomen may result in the development of a pyopneumothorax through continuity or contiguity of tissue, and through the lymph channels. The case here reported teaches that it is also possible for a certain anatomical peculiarity to result in the same. It shows that in incarcerated diaphragmatic hernia the bacteria may wander through the injured intestinal wall, producing an inflammation of the serous membranes; gases are produced through the action of bacteria, and thus, without perforation of either the intestines or the lungs, there results a pyopneumothorax.

The post-mortem in this case revealed the following: An incarcerated diaphragmatic hernia on the left side, containing the left knee of the colon and the greater omentum, fibrino-purulent pleurisy with pyopneumothorax. Compression atelectasis of the left lung and dextro-position of the heart. There was no perforation of the lung or intestine. The inflammatory process extended from the serous covering of the loop of intestine to the pleura.

The patient succumbed so rapidly after the first symptoms were noticed that careful diagnosis could not be made, though the conditions revealed by the post-mortem were suspected.

The Typhus Epidemic in Zarskoie-Selo in November, 1901.—UNTERBERGER (*St. Petersburger Medicinische Wochenschrift*, No. 17, 1902).—The year of 1901 was the driest that had been experienced since 1830. The water supply for Zarskoie-Selo is transmitted a long distance through a canal which is uncovered in one-half its extent. The daily water supply is about 1,500,000 gallons. Its source is the wells of Taitza. During the very dry season experienced last year the daily quantity of water was reduced to 600,000 gallons. It became necessary to connect other reservoirs with their present supply. This was done by means of a large ditch on October 30th. The water became very cloudy and remained so for almost a month. On November 2d there developed three cases of typhoid fever in the military barracks, which were near the water-tower. The number of cases rapidly increased in the city and reached their height about November 16th, when they began gradually to decline. The last case occurred on December 12th, there being one hundred and fifty-one all told. Inasmuch as there had been no cases of typhoid fever in the vicinity of the reservoirs or the canal to which this epidemic might have owed its origin, the author concludes that the germs must be constantly present in their soil, and that the rapid rush of the

water from the new supply stirred up the upper layers of the canal bottom which contained typhoid germs. One month after the beginning of the epidemic, the water was found to be free from the bacilli. This water had been known for its purity for a hundred years or more, and in all probability possesses ingredients which are detrimental to germ life. This may explain, too, the very short duration of the epidemic.

The Treatment of Ileus with Belladonna Derivatives.—HONIGMANN (*Centralblatt fuer die Grenzgebiete der Medizin und Chirurgie*, Nos. 7, 8, and 9, 1902) presents an exhaustive review of this subject with some fifty literature references. It is interesting to note that as far back as 1803, an enema containing belladonna was successfully used in a case of incarcerated hernia which could not be reduced. The article deals extensively with the history and development of this therapeutic measure, the theories concerning the action of atropin upon the intestines, clinical experience in the subcutaneous use of atropin in ileus, etc., etc.

In order to determine the true value of atropin it is necessary to study a large number of cases with reference to the following points: (1) What factors brought about the ileus in those cases that were cured by atropin? (2) What is the relationship in these cases between the cure and the remedy used? (3) What factors produced the ileus in those cases in which atropin failed? (4) Has the atropin manifested any harmful influences?

A careful review and summing up of the literature leads to the following conclusions:

1. In cases in which strangulation ileus is diagnosed, the atropin treatment is contraindicated. The same is true of incarcerated hernia.

2. In cases of obstructive ileus, as well as in dynamic and functional disturbances of the intestines, atropin is sometimes effective.

3. The action of belladonna preparations is chiefly sedative, as in opium. Whether they are capable of stimulating intestinal peristalsis has not been absolutely determined through clinical observations.

4. The sedative action of atropin often appears after small subcutaneous doses ($\frac{1}{2}$ –1–2 mg.); sometimes, however, only after repeated large doses. Doses of 5 mg., as recommended by Botsch, should never be used in the beginning. It is best to learn the patient's tolerance for the drug by beginning with small doses ($\frac{1}{2}$ –1 mg.).

5. Toxic symptoms of different intensities occur in most cases in the use of belladonna preparations, especially when the maximum dose is overstepped. Individuals over fifty more often present toxic symptoms, even after moderate doses, than young individuals after large doses. Special precautions must be taken in the administration of the drug to old people.

6. According to observations thus far made, atropin has no special advantage over opium, but, on the other hand, the disadvantage of unpleasant symptoms, often regardless of the dosage. These can become dangerous. Atropin should be used, therefore, only where opium fails.

7. If atropin does not relieve the ileus within two days (advent of flatus and stool), one must not be misled by the state of euphoria produced during its use, but should recommend the necessary surgical interference. When such is refused, or there are contraindications, atropin may be continued.

Observations Concerning the Extirpation of the Hypophysis Cerebri and the Transplantation of Carcinoma and Thyroid Gland into the Hypophysis.—FRIEDMAN (*Berliner Klinische Wochenschrift*, May 12, 1902).—In this article the author reiterates his earlier observations concerning the hypophysis cerebri, and adds the results of recent experiments upon cats. He has devised an operation for the removal of this organ which is both easy and certain. Adult cats from which

the hypophysis had been removed nine months previously showed upon post-mortem no ill-effects whatever as a result of the operation. There was complete ossification of the bony defect at the base of the skull, and the various organs of the body, including the thyroid gland, and the skeleton were in perfectly normal condition. He concluded, therefore, that "the hypophysis cerebri is certainly not a vital organ in an adult cat. If, indeed, it has any important function to perform, this must be carried out by some other organ after its (hypophysis) removal." It is hardly probable that this substitute is the thyroid gland, for in one case both hypophysis and thyroid were removed simultaneously. The animal remained perfectly well for twenty-three days when it died of pneumonia.

Von Bergmann maintains that while the loss of this organ does not interfere with the normal functions of the adult animal, it may produce disturbances in the development of young animals. The author's experiments led him to the conclusion that the hypophysis is neither necessary to the life or development of young animals.

Efforts to transplant carcinoma upon the hypophysis were not altogether satisfactory. Tissue from the thyroid gland, however, was successfully transplanted upon the hypophysis without losing its glandular structure.

Physiology and General Pathology of Vomiting.—JANOWSKI (*Sammlung Klinische Vorträge*, Volkman, No. 333, 1902) defines carefully what is meant by vomiting, and reviews in detail the physiology of the subject. He describes a series of experiments on dogs with a view to clearing up the role of the vagi in this connection. The causes of vomiting are numerous, and in order to be able to arrive at a prompt diagnosis in conditions accompanied by vomiting, it is necessary to classify these factors. The etiological classification of vomiting is presented as follows:

(A) *Vomiting of central origin.*

I. Vomiting due to intoxications (1) through substances produced by the organism itself, as in uremia; (2) through substances transmitted to the organism from without, such as alcohol, morphine, apomorphine, chloroform, snake venom, etc., or those produced by pathogenic organisms, as in scarlet fever, typhoid fever, diphtheria, etc.

II. Vomiting due to intoxication of the center, and pressure upon the same simultaneously, as in infectious disease of the brain (encephalitis, abscess, etc.) and the meninges.

III. Vomiting due to pressure upon the center alone, as in tumors of the cerebrum, or inflammatory and edematous conditions.

IV. Vomiting due to the variation of the blood supply to the brain, as in concussion of the brain, sea-sickness, insolation, Meniere's disease, occasionally in Basedow's disease, etc.

V. Vomiting due to psychic influences upon the center of vomiting, transmitted through the sense of smell, taste, etc.

(B) *Vomiting of reflex origin.*

Due to an irritation of the (1) base of the tongue, (2) pharynx, (3) larynx, (4) trachea, (5) bronchi, (6) lungs, (7) esophagus, or (8) stomach. The last named may be due to (a) diseases of the stomach, as ulcer, carcinoma, pyloric stenosis, hyperacidity, hypersecretion, dilatation, acute inflammation, chronic inflammation, nervous dyspepsia, etc., (b) emetics of all sorts; (9) diseases of the duodenum. (10) the intestines, (11) the bile ducts, (12) liver, (13) pancreas, (14) suprarenal capsules, (15) kidneys and ureters, (16) the uterus and its appendages, (17) inflammation of the peritoneum, (18) affections of certain nerves, as the vagi.

(C) Vomiting of mixed origin.

This form may, in different cases of the same disease, be at one time central in origin, at another reflex. In this list may be included the vomiting in hysteria, migraine, neurasthenia, poisoning by nicotine and alcohol, Basedow's disease, gastric crisis in organic disease of the spinal cord, chlorosis, anemia, acute tuberculosis, and rickets.

Peripheral Venous Thrombosis in Pneumonia, with Report of Three Cases and a Review of Those Previously Recorded.—STEINER (*Johns Hopkins Hospital Bulletin*, June, 1902).—In five hundred pneumonias observed at the Johns Hopkins Hospital but three cases of peripheral venous thrombosis were met with. In the first case there was pneumonia of both lungs, crisis on the ninth day, accompanying pleurisy of both sides; second attack of pneumonia seven days after the crisis, of five days' duration. Thrombosis of right popliteal vein occurred twenty-eight days after the crisis and six days after the termination of the second pneumonia attack; gradual recovery. In the second case thrombosis of the right internal saphenous vein occurred in the sixth day of the disease, and the patient died on the twelfth day. In the third case there was a thrombosis of the right popliteal vein six days after the patient's temperature became normal.

It is rather surprising that thrombosis is so rare in pneumonia, since, in this affection, the blood is rich in the elements necessary for clotting. Only thirty-eight other cases could be collected from the literature. The thrombosis occurred during convalescence in twenty-seven of these; in one it occurred on the day of the crisis, and in four during the course of the disease. It must be considered as a sequelæ, not as a complication of the disease. The lower extremities were always involved. As in typhoid fever, and other infectious diseases, the thrombi are found most often on the left femoral vein. The left extremity was alone concerned in sixteen cases, the right in ten, and both in seven. The more frequent involvement of the left is due to the more difficult return flow of the blood on this side in consequence of the greater length and obliquity of the left common iliac vein and its passage beneath the right common iliac artery.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

The Forerunners and the Ultimate Causes of the Sudden Attack in Appendicitis.—RIEDEL (*Archiv fuer Klinische Chirurgie*, Bd. lxi).—This article of one hundred and sixty-two pages contains more of scientific worth than any other which has been written upon this subject in recent times. The author does not deal with appendicitis as an entity, but separates sharply the various pathological pictures, and upon the pathological aspects of the matter builds up the various surgical working ideas. Two general divisions are made: the purulent and the non-purulent forms of the disease. The non-purulent may be of two kinds: (a) Due to the presence of a stone which does not erode the coats of the appendix, but which, by virtue of being putrid and in contact with the mucous membrane, can lead to trouble at any time. (b) Appendicitis granulosa is the other one of the non-purulent varieties; this is characterized by the production of granulation tissue beneath and between the tubular glands of the mucous membrane. The symptoms may be severe or very slight, and the process may eventuate in complete healing or the organ may become obliterated. With the naked eye nothing is to be seen as abnormal on the appendix, but the most

pronounced changes are seen with the microscope. There are no acute attacks, in the true sense of the word, but the affair is strictly chronic. A stone may be ejected from the appendix, and all the symptoms of disease subside; in so far we see a resemblance between affections of this organ and those of the gall-bladder, from which the author long ago pointed out that a stone may be thrown out and thus the disease brought to a close. (A so-termed successful spasm.) A polyp is likely to form around a stone or from the bed in which it lay, so it comes about that such a formation may be seen projecting from the appendix into the cecum. It is well known that a stricture may follow the inflammatory tissue changes which result from the presence of a stone; but a stricture may also follow the action of appendicitis granulosa, and either form is likely at any time to result in hydrops or empyema of the distal portion of the little organ. In the same way it is seen that partial obliteration, no matter how extensive, is no protection against disease; the author found a peri-appendiceal abscess, around a small dilated portion of an organ, the greater part of which had been obliterated.

Purulent appendicitis is a much more grave affair than the condition which has just been described. It is brought about by a predisposing local condition, as well as by a particularly severe form of infection. It must be divided into perforative and non-perforative forms, the former of which can always be regarded as caused by the more virulent organism. It is always a mild infective organism which wanders slowly through the lymphatics and leads to a peri-appendiceal abscess; the more virulent ones lead to gangrene of the organ in a short time. A great mistake is made by those who wait for severe symptoms before operating on a suppurative appendicitis case; the case may be as indicated without there being any severe manifestations; in fact, the author saw one in which the patient died without symptoms worthy of mention until the very last.

Where a stone is in the appendix, there are always adhesions outside the site long before there occurs a perforation, but unfortunately the escaping contents has the property of very soon dissolving such adhesions; hence if an operation be not done early, the free peritoneum is exposed to contamination. The indications of the attack are present before the perforation has occurred in every case. If then no operation has been done while the pus is still confined by the adhesions then the patient's life depends in great measure upon the position of his appendix.

As to the prognosis in a purulent case, one thing is of supreme importance, viz., the condition of the peritoneum; if it is chronically diseased then it absorbs badly, and consequently the patient is not so likely to be poisoned fatally; on the other hand, the normal membrane is highly sensitive and absorbs most readily, consequently renders the patient's chances worse.

Considerations on Late Laparotomy in the Course of Appendicitis.—TOUSSAINT (*Archives Provinciales de Chirurgie*, Tome xi, No. 4).—Twenty-two cases in point are presented by the author, who is a French army surgeon. Characteristic symptoms are not present when the abscess is behind the cecum, but experience will prevent one being deceived by this fact. When the pulse is above 100 an operation is generally necessary; during the same the abdomen is to be washed out with saline, and a hypodermic injection of the same is to be made. The ilio-cecal angle is to be caught between the thumb and finger, whereupon the appendix will be easily found. Rectal examination is of the greatest worth in many cases. An ulcer of the appendix (follicular) is just as sensitive as one of the stomach or intestines, hence the pain in many cases.

The Surgical Complications of Influenza.—RUHEMANN (*Centralblatt fuer die Grenzgebiete der Medizin und Chirurgie*, Bd. v, No. 9).—These may be divided into two classes: those caused by the influenza germ itself, and those caused by

other organisms whose activity is favored by it. There may be surgical complications of influenza, an influence of influenza upon operations or the appearance of the disease after an operation; hence, the subject must be studied from all these standpoints. The surgical diseases which it may produce in the respiratory apparatus are many and varied; in addition to these, empyema, liver abscess, hemorrhages into the kidney and abscesses of the same, hemorrhages under the skin and boils, synovitis, osteomyelitis, neuritis, and infective thrombosis of arteries and veins. Operations during the disease may turn out very badly; pyemia may occur with a perfectly healthy-looking wound for example. The disease is prone to attack those who are subjected to operations during the prevalence of an epidemic. The practical conclusion is to be drawn that no surgical procedure is to be attempted during convalescence from influenza, unless it be for a complication of that disease.

Resorbable or Residuary Abscess of Appendiceal Origin.—MAUCLAIRE (*Gazette des Hopitaux*, May 6, 1902).—The author illustrates by several of his cases the tendency of pus to become sterile in the course of time. This holds true around an appendix just as well as it does for the pus in a pyosalpynx. Sometimes the pus does not resorb, and these cases must be operated upon by reason of that fact. The treatment in an acute case must be to favor resorption, as in the interval the removal of the offending organ can be accomplished with much greater safety than at any other time. The paper contains nothing that is really new; the author's experience, however, demands serious consideration.

The Strength of the Abdominal Wall After a Laparotomy in Which Primary Suture or the Mikulicz Drainage is Employed.—PICHLER (*Beitrag zur Klinischen Chirurgie*, Bd. lxiii, Hft. 1).—In making the suture referred to, no silk is used in the clinic of v. Mikulicz, since that material is a sort of drain made up of dead space, and is so likely to carry infection along itself. Silk-worm gut is the material used for buried sutures. It is less likely to be accompanied by pus even where it is extruded from the tissues after healing has taken place. The ligatures in the clinic are always of catgut, though the author does not tell us how the latter material is to be sterilized.

Just before an operation the skin is painted with iodine, in the hope of killing germs in the deeper tissue glands; the process is warmly advocated. The abdomen is closed in two layers, everything but the skin being embraced by the deeper one. Stitches are taken out on the tenth day, the patient raises up in bed two days later, and at the end of two weeks from the time of operation sits up. After forty-three primary sutures the author has to note four herniæ; a surprisingly large number we would term it in America. The surprisingly large number of 65.2 per cent. herniæ followed drainage. They had the greatest tendency to hernia where the suppuration was found to be most extensive; it would seem that the most highly diseased abdominal wall predisposing thus to it. Secondary sutures did no good in preventing post-operative hernia. An abdominal supporter should be worn after every drained case; it may not absolutely prevent a rupture, but will stop the increase of size. If a hernia occurs at all, it is usually in the first months after the operation.

The Autositic Double Monstrosities Which Have Been Operated Upon and Those Which Are Operable.—BAUDOUIN (*Revue de Chirurgie*, No. 5, 1902).—These have been subjected to operation for three reasons, viz., in obedience to a wish that they be separated, after one has become ill, or after one has died. From the resemblance of the figure to certain letters of the alphabet, they are called "H," "X," "Y," or "inverted Y" monsters. Certain of the "H" variety being alone operable. These are known as the "pages" or teratopages, and as they are at-

tached together, are called cephalic, pelvic, or abdomino-thoracic. Of the cephalic variety, three metapages survived their birth, one pair having been operated upon at the age of ten years, one twin being killed directly by the procedure. The cephalopages of this same variety are more complex in their attachment to each other, and are extremely rare. Five cases have been reported, and they may be called operable where their cerebrii are independent.

Of the pelvic variety, eight have been known, one living to the age of thirty-four years; one pair has been operated upon and with double fatality. The only one now on earth is in Berlin at the age of twenty-four. The operation is usually one of necessity, as so dangerous here, and the worst mutilation is to be borne by the twin whose impending death brought on the operation. The pelvic osphuopages are too intimately attached to make a separation possible; the only one known is now in the United States at the age of fifty-two years. The pelvic ischiopages are rarely viable, so of course inoperable; but one ever reached one year of age; ten have been reported in all; none are now living. No richipages were ever born alive. One ischiopage lived three months, but was, as a matter of course, inoperable.

The abdomino-thoracic omphalopages are the most simple of all, as far as the operation goes, being simply united by the umbilical cord. Next come the xiphopages, of which fourteen have been known; one is now living at the age of seventeen, and is considered operable. Two were operated on in utero, and four have been separated after birth. Of these last four, one operation, performed in the seventeenth century, forms the only case in all the world's history where both twins survived the separation. In this case there were no visceral connections, as is also true of an operation done in 1860, one of the latter children being still alive. In the other two instances the livers were joined, and in one, both twins died, while the surgeon (Doyen) saved one of the other pair.

Of the thorocopages there is first the xiphothoracopage, in whose pedicle the pleura and pericardium take part together with transposition of the viscera. The first operation for this form of the abnormality was done in 1900, and one child lived. This is, by the way, the only known pair of its kind that ever survived the birth. It may be mentioned, in addition, that the livers in this instance were connected, too. In the typical thorocopages, so-called, the condition of the two hearts, and the amount of fusion of the two chests governs the operability of the given case. Nine such have been reported. The sternopages have but one heart for both, hence are inoperable, while the anatomy of the ectopages is so little known that nothing can be said of them.

This splendid article can only be appreciated if read in the original; no review can give more than an idea of its contents.

Gastro-Enterostomy Combined with Enterostomy, Made by the Use of the Elastic Ligature.—MEYER (*Centralblatt fuer Chirurgie*, No. 7, 1902).—Two successful cases are reported. The ligature had in one case a diameter of 2 mm. and in the other of 3 mm. The cutting ligature was surrounded by silk sutures in both cases, and seems to have done its work in an admirable manner. The folds, which are made in the walls of the hollow viscera are seen to smooth themselves out in about forty-eight hours. It is no disadvantage that the new opening is not complete before the expiration of four days, since rectal feeding can effectually take the place of the stomach for that time. This method is pronounced by Myer to be more simple and rapid than any other in use at the present time.

Studies in the Pathogenesis of Appendicitis.—KRAMER (*Annals of Surgery*, June, 1902).—The article is illustrated by several fine cuts of the microscopic appearance of normal and diseased appendices. The concretions which the author has found have been made up of mucous and epithelial cells. The follicles

may break down and form ulcers, just as in typhoid fever. Perforation of the appendix is most prone to take place on the side opposite the mesenteric insertion, since the blood supply is poorest at that point. The author reasons that the little organ has no peristaltic activity, after trying electrical stimulation in two cases on which he operated, and makes this a factor in the pathology of the subject. He has found the organ represented by a fibrous cord, at the operation, where pronounced symptoms had been present; the same disappearing immediately after the procedure.

Pylorus Stenosis in the Suckling Infant.—TRANSTENROTH (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, Bd. ix, Hft. 4 und 5).—In the year 1897 two noteworthy events made this subject of interest; it was claimed that the disease is always spastic; and second, the first case was cured by operation. The author reports a case in which vomiting of milk was almost constant; the infant passed little feces and urine, going as long as a day and a half at a time without soiling itself. There was a tumor in the epigastrium as large as an egg (the stomach, no doubt), and increased peristalsis was present, but always stopped after the milk was vomited. The infant, which weighed eight and one-half pounds at birth, was down to six pounds on its thirty-ninth day, so an operation was determined upon. A thickening of the pylorus was plainly felt, but it was impossible to find its lumen, hence it could not be dilated. A gastro-enterostomy was performed and the child never vomited again; urine and stool were now present in normal quantity, and in three months four pounds had been gained. The intervals between attacks indicate that the affair is spasmodic, while an organic stenosis may become absolute. The spasmodic form requires medical treatment, while surgical intervention is alone able to help one afflicted by the organic. Gastro-enterostomy is the best operation; dilatation can be of lasting avail in none but the spastic; and pyloroplasty, tried once, had to be followed by the procedure first named.

Diseases of the Mesenteric Lymphatics in Acute Appendicitis.—QUENU (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, Tome xxviii, No. 17).—The avowed intention of this article is to deal particularly with the diagnosis of suppurative and gangrenous appendicitis. The gangrenous form of the disease is regarded as the most serious of all, decidedly more so than the simple perforative. It may be that one finds a case in which the symptoms are serious; on opening the abdomen there is found (aside from the appendix) little wrong except a great increase in the size of the lymphatic nodes at the junction of the caecum and ilium. It is very likely that these same nodes, their position being fixed, occasion the pain which is so constant at McBurney's point; the appendix is so variable that it could not account for this in all cases. Patients with diarrhea have this symptom because of poison circulating in these lymphatics, and are to be operated upon during the first day if possible.

Spina Bifida.—BOCKENHEIMER (*Archiv fuer Klinische Chirurgie*, Bd. lxx, Hft. 3).—There are three varieties of the disease, anatomically speaking, the myelocoele, the myelocystocoele and the meningocele. Of these the first mentioned is the most common and originates in the following manner: There is complete closure of the canala centralis of the cord, as well as non-union of the structures which should cover the cord behind. In addition to this, there begins a hydrops in front of the cord, and the same is spread out and forced out of the posterior opening in the form of a sac wall. A myelocoele has three zones commencing at the periphery, as follows: Zona dermatica, covered with long hair and consisting of all the epiblastic as well as mesoblastic derivatives; zona epithelio-serosa, consisting of the pia mater and epithelium from the surrounding skin; zona medulo-vasculosa, representing the spread-out and degener-

ated cord. At the upper and lower poles of the tumor can be seen the cranial and caudal extremities of the interrupted central canal, and from them cerebrospinal fluid often escapes. The medulla is of course exposed to all sorts of insults as well as constantly injured by being stretched over the hydrops fluid. Where the fluid is within the arachnoid the spinal nerves run free through the sack and can be seen as shadows upon the same being illuminated; but when the fluid is outside the arachnoid, then the nerves run in the wall of the sac and can often, along with the cord, be made out on inspection of the tumor. The motor nerves are stretched the most and are the smallest, so least resistant, hence motor disturbances are commoner than those of sensory nature; trophic changes, too, are common, as bed-sores illustrate. Umbilical hernia and hydrocephalus are prone to accompany this form of the anomaly, while the greatest dangers to the patient's life are bursting of the sac and meningitis in consequence of infection.

In myelocystocele the cord has closed around the central canal, but the mesoblastic derivatives have not completed their union. Then occurs a dilatation of the central canal, and in consequence of the unusual opening, as well as of the bony canal being too short, the sac herniates. The nerves take their usual course, hence the posterior are stretched more than the anterior, and sensory disturbances are here more common than those of motor nature. Hydrocephalus is common, but commences after birth, and the child is better developed and stronger than one afflicted by myelocele. There is usually fat covering the sac, but the same can be replaced, the pressure thus produced causing a wave to be felt at the greater fontanella.

The meningocele is the rarest of all three; it is entirely outside the cord, and is the consequence of imperfect closure of bony and dural coverings. The hydrops fluid, which produces the herniation of the sac, may be within or outside the arachnoid. The tumor is usually pedunculated and the bone opening small. It cannot be compressed, and there are no accompanying deformities.

A diagnosis of the exact form of spina bifida existing in a given case may not always be possible, though the observer will be aided by giving attention to the following points: The myelocele has its three zones, presents functional disturbances as a rule, and is present in imperfect subjects. The myelocystocele is small, has its bone opening to one side as a rule, and can be compressed within the canal of the column. The meningocele has a small bone opening, is pedunculated, is on the sacrum, shows no accompanying deformities.

In all three forms an operation is to be performed where there is no hydrocephalus and no functional disturbance, or the tumor may burst; but in case this does not occur, functional trouble may arise at a later date. In the myelocele the zona epithelio-serosa is to be excised and the cord replaced in the canal, while in the other two forms the wall of the sac may be simply excised, though this would be certainly fatal in a myelocele, as experience has repeatedly proven. After this a plastic closure of the opening is to be made.

During the past twenty years sixty-three spinæ bifidæ have been treated by v. Bergmann. Of these there were thirty-four myeloceles, twenty-four myelocystoceles and five meningoceles. Eight myeloceles were operated upon and five died. Out of nine myelocystoceles which were operated upon, seven were cured. Three meningoceles were thus treated and all cured.

Apropos of Appendicitis.—PICQUE (*Le Progres Medical*, May 24, 1902).—The question as far as recurrent appendicitis in the interval is settled; everyone operates after some two attacks. The author, in writing of acute appendicitis, deplors the fact that he has seen so many patients die of general peritonitis in consequence of the man in charge abstaining from early operation, and attempts to establish a rule for the treatment of these cases, too. He would operate in every case in which the patient could not be improved by twenty-fours of med-

ical treatment. So it is seen that he is not disposed to be too one-sided. The anatomical distinctions are not of as great importance as they would be if clinical manifestations could inform us as to which patients can recover and which cannot; hence one must interfere early, as stated above. Why not apply to appendicitis the ordinary rules which would guide the surgeon in other suppurative affections of the abdomen?

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

Orexine in the Vomiting of Pregnancy.—LUDWIG PICK (*Samml. Klin. Vortr.*, 1902, Nos. 325 and 326).—By “hyperemesis gravidarum” is meant not the almost physiological vomiting that is so frequently observed early in pregnancy, and that ceases of its own accord about the fourth month, but that unappeasable vomiting which extends into the second half of pregnancy or even to full term. This is a serious complication, which occasionally endangers the woman’s life, and which has often been made the ground for inducing premature labor.

In his monograph Pick reports *in extenso* twenty-two such cases, all observed in the University clinic at Vienna under Prof. Schauta. All the cases were taken into the hospital, and strict rest in bed and a milk diet were enjoined. In some of the lighter cases, following the advice of Prof. Frommel, 5 grs. orexine were administered three times daily. However we may explain the action of this drug, the results (according to Pick) were exceedingly satisfactory. In one very severe and obstinate case the drug was given per rectum. After three days the vomiting ceased; four days later, in spite of the cessation of treatment, the patient could again take solid food; a week later she was discharged cured.

The Use of Potassium Nitrate and Nitrite in Arterial Sclerosis.—Sir LAUDER BRUNTON (*Deutsche Med. Wochenschr.*, 1902, No. 16).—As the arteries grow old and lose their elasticity they offer an increased resistance to the blood current. As a result of this increased resistance the heart tends to become hypertrophied, and in consequence of these two circumstances (cardiac hypertrophy and increased peripheral resistance) the blood pressure in the arteries rises as old age comes on. The excessive blood pressure may produce cerebral or cardiac disturbances. In the heart they often show themselves as angina pectoris, in the brain as paralysis. The diminution of blood pressure in such cases is accordingly of the greatest importance. In cases in which the increased tension causes thoracic and cardiac disturbance (*e. g.*, angina pectoris), the blood pressure may be rapidly and greatly, though only temporarily, lowered by means of drugs such as nitroglycerin or amyl nitrite. Nitro-erythrol (gr. ss. t. i. d.) produces the same effect, more slowly but of longer duration. The long-continued administration of this drug can make patients, who have been almost constantly suffering from angina pectoris, perfectly comfortable. None of these drugs, however, are indicated when we wish to avoid rupture of a cerebral vessel and the resulting paralysis. For this purpose we require a medicament which acts more slowly, less powerfully but more permanently. Such a drug is potassium nitrate (salt-peter), which may be prescribed as follows: potassium bicarbonate thirty grains, potassium nitrate twenty grains, sodium nitrite one-half grain, in a large tumblerful of water every morning. This treatment may be continued for a long time. The potassium salts, when given in large doses, act as cardiac depressants. This action is however probably rather beneficial than deleterious in cases of

excessive blood pressure where we desire a double effect: firstly, to diminish the activity of the hypertrophied heart, and, secondly, to increase the permeability of the sclerosed arteries, thereby diminished the pressure both at the cardiac and the peripheral end of the circulation. All the nitrites have the power of dilating the small arteries and so of reducing the blood pressure. Leach has shown that the nitrates have the same power; they act more slowly and more feebly, but, on the other hand, their effect endures longer. The combination of nitrates and nitrites offers the advantages of each and moreover stimulates the renal activity. While the nature of the process is as yet not quite clear, there can be no doubt that in the senile body substances are found that exert a stimulus upon the arterial muscularis and produce a contraction of the arterioles. This action may be effectively combated by the treatment outlined above. In nephritis, and especially in the gouty kidney, this treatment is particularly effective. If begun early before the appearance of albuminuria and before the patient begins to urinate at night, when nothing abnormal can be found but the arterial sclerosis and the accentuated second aortic sound, life may be considerably prolonged and attacks of angina pectoris or paralysis may be prevented for many years. The author accordingly advises the use of bicarbonate and nitrate of potash together with small dose of nitrate of soda in all cases of high arterial tension especially when associated with gouty kidneys.

The Treatment of Chronic Diarrhea.—M. SOUPALT (*Soc. de Therap.*, March, 1902).—In a very interesting article Soupalt discusses the nature and treatment of idiopathic chronic diarrhea. The disease is due neither to any important anatomical alteration nor to an infection. It is characterized by frequent liquid stools accompanied by meteorism and colicky pains. There are often gastric disturbances of greater or less severity. The disease is exceedingly chronic, often lasting many years. It is usually accompanied by a reduced or abolished acidity of the gastric juice and is probably due to the premature passage of the stomach contents into the duodenum, characteristic of this condition. As large doses of hydrochloric acid have the power of contracting the pylorus and of retarding the expulsion of the gastric contents, the author was led to use the remedy in this condition, as it appears, with very satisfactory results. He gives fifteen to thirty drops daily of the strong acid, preferably as a sweetened lemonade, before meals. Some patients require more, some less. When the proper dose has been ascertained the results are usually prompt. The patients show a distinct improvement within a week, and a permanent cure results in a reasonable time. Proper dietary and hygienic measures greatly increase the efficiency of the treatment.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

The Analogies Between Plimmer's Bodies and Certain Structures Found Normally in the Cytoplasm.—E. R. LE COUNT (*The Journal of Medical Research*, May, 1902).—Le Count believes that there are analogies between Plimmer's bodies in cancer cells and certain structures in the cytoplasm of normal cells. He has made use of sublimate solutions for fixation purposes in studying cancer cells met within axillary nodes removed in connection with mammary carcinoma. He found typical Plimmer's bodies in these lymph glands, possessing single or double and distinct capsules with a more faintly staining zone between the cap-

sule and the so-called nucleus. With Borrel's method the encapsulating zone stained more readily than with the hematoxylin and iron method. Two or more of the so-called parasites were often seen in a single cell. He states that he has never seen a Plimmer's body in such a position that it could be safely stated that it was extra-cellular. Carcinoma cells are large cells and in serial sections; a single dividing nucleus often appears in two or more sections; therefore, apparently extra-cellular parasites might belong to cells, a large part of which were to be found in other sections; nor were Plimmer's bodies seen in other than epithelial cells. There are strong analogies between Plimmer's bodies and the archoplasmic elements of normal cells, not only in their discovery by similar technical methods, but also in their position. Besides, the sporulation or multiplication of the cancer parasite, by budding, is comparable to the division of the centrosome by simple cleavage. The archoplasmic structures described by Heidenhain in the giant cells of a mesenteric lymph gland of a young rabbit that died with a diarrhea contained many central bodies that are very comparable to forms described as Plimmer's bodies. The rayed periphery sometimes observed in Plimmer's bodies reminds one forcibly that the astral fibers of the archoplasm converge at the margins of the centrosome.

Le Count in conclusion says that enthusiastic advocates of the parasitic theory of cancer who use Plimmer's bodies in support of their views should be required to exclude or account for the centrosome and the enveloping variously named formations of the archoplasm in carcinoma cells.

Angina Due to the Bacillus of Friedlander.—CHARLES NICOLLE and A. HEBERT (*La Presse Medicale*, May 31, 1902).—The publication by Descos in *La Presse Medicale* of his work with the bacillus of Friedlander as the cause of anginas is identical with the first observations made along this line by Nicolle and Hebert, first in *Annales de l'Institut Pasteur* and later in *La Presse Medicale*. Together with the cases reported by Billet and Mayer, to date there have been reported twenty-two cases of angina due to the bacillus of Friedlander.

A recent case is reported by Nicolle and Hebert: a twelve-year-old daughter of a brother physician became ill with a pseudo-membranous affection of the tonsil. Examination showed a whitish, diphtheritic-like membrane on the right tonsil, with a height of six to seven millimeters and a width of from 4 to 5 mm. This membrane was adherent intimately to the underlying submucosa. Outside of the pharyngeal discomfort referable to the presence of the false membrane on the tonsil, the child suffered no marked discomfort; there was no fever, there was a normal pulse, no eruption and a good appetite. Diagnosis of angina, due to the pneumo-bacillus, was made. Direct examination of the false membrane with cultures on blood serum confirmed this diagnosis—*i. e.*, the encapsulated bacillus of Friedlander. The membrane disappeared after a few weeks, no decided symptoms having appeared during the whole period of illness.

This observation demonstrates the two characteristics which we have already pointed out as accompaniments of a bacillus Friedlander angina—*i. e.*, they are benign and tenacious. Prognosis is good in these cases.

The bacillus of Friedlander is not a normal inhabitant of the mouth even as a harmless saprophyte. It was found by Netter in but nine instances out of one hundred and five examinations. Nicolle and Hebert examined 3,670 pharyngeal exudates and found it but twenty-four times. In the eleven reported cases it was the principal factor in the production of a disease; in the other cases it was a harmless saprophyte.

A Preliminary Note Upon Certain Mechanical Microtechnical Factors Concerned in Producing Segmentation and Fragmentation of the Myocardium.—WALTER H. BUHLIG (*The Journal of Medical Research*, May, 1902).—The object of the investigation was to determine in how far the microscopic appearances designated "Segmentation and Fragmentation of the Myocardium" were the result of artifi-

cial conditions. It was assumed that these appearances were in reality artefacts produced principally by mechanical factors. The writer is now in a position to state that this explains many of the supposed cases of fragmentation of the myocardium. Later investigation may enable him to make the sweeping assertion that a diagnosis based upon the microscopic appearances of sections of cardiac tissue is erroneous in all cases.

The heart of a dog was used, also the apparently normal human heart and the evidently diseased human heart, the hearts of rabbits and dogs. Various methods of fixation were employed: Zenker's fluid, formalin, Bensley's fluid, Flemming's, Carnoy's chloroform acetic acid alcohol mixture. Infiltration and imbedding in celloidin and paraffin were performed. Several microtomes were used: the Automatic Precision Microtome of Minot, the Minot-Zimmermann Automatic Rotary Microtome, the Bausch and Lomb Student Microtome and the large sliding microtome of Leitz. A number of different microtome knives were used. Ordinary hematoxylin-eosin staining was mostly used.

In the series of experiments prosecuted it was found possible to reproduce most of the pictures usually described both as segmentation and fragmentation of the myocardium, the only exception being the most extreme examples of general segmentation seen in some human hearts. The so-called "focal segmentation" could be invariably reproduced. The factors concerned in producing these artefacts are as follows:

Imperfections of the knife edge: even though a microtome blade to the naked eye may appear smooth and even, microscopic examination with a lense of low power will always show a wavy line of unevenness. No knife can be made to have a perfectly smooth and perfect microscopic edge. The rough edge of the knife is regarded by Buhlig as the chief causative agent in the artificial production of segmentation and fragmentation.

Direction of the Section.—This goes hand in hand with the edge of the knife. By direction of section is meant the angle made by the two lines, one represented by the direction of the cut, or the "pull" of the object; the other by the long axis of the heart muscle fibers. An angle of approximately thirty degrees was most favorable for the production of the artefacts.

Factors of secondary importance were: (1) Reagents used in treating the tissue—tissue fixed in Carnoy's mixture seemed especially suitable for producing these artefacts. (2) Nature and consistency of the imbedding mass: sections cut in paraffin and celloidin show an equal degree of segmentation, so these agents give constant equal results. (3) Knife and object vibration: curious dark spots were observed arranged transversely to the long axis of the heart cells, in section cut from material fixed in Carnoy's mixture. These spots represent accumulations of heart muscle fragments, which might have been pushed or piled up. These striations represent vibration of the knife or object, or both, and closely simulate cement lines in places. (4) Knife tilt: with the knife tilted somewhat more than usual, the sections cut less readily and seem more broken up. The full significance of this factor is not yet determined. (5) Thickness of section: thin sections are more favorable for the appearance of these artefacts for two reasons: *first*, there will be less tissue to hold together; *secondly*, small imperfections in the sections will be more easily perceived. (6) Knife slant: nothing conclusive in this regard has as yet been determined. Suspected factors which were apparently excluded were the make of knife, the method of section affixing (to slide) and mounting, and the rapidity of section.

The work of Buhlig is certainly important, inasmuch as it calls attention to the fact that what has been written about so much in the past few years as an "agonal" change in the heart just prior to death is not really a pathologic change at all, but merely an artefact. Perhaps, as he says in the beginning of the article, segmentation and fragmentation of the heart does not exist as a pathologic entity.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

A Secondary Adenoma of the Ovary.—RICHARD SAUTER (*Monatschr. fuer Geb. und Gyn.*, December, 1901).—The author reports the following case: A patient, sixty one years old, was admitted to the hospital with severe pain in the abdomen, especially on the right side. To the right and behind the uterus a tumor was felt. It was the size of an orange, fixed to the pelvic wall and distinctly differentiated from the uterus. Diagnosis of carcinoma ovarii dextri was made. Laparotomy. A pedunculated tumor corresponding to the right ovary was removed. In the lower part of the ileum a little tumor was found which partly occluded the lumen of the intestine; therefore an entero-anastomosis was performed. Small nodules were seen scattered over the peritoneal cover of the extremely dilated intestines. Patient died twelve days after the operation. Microscopical examination of both ovaries revealed adenoma. The intestinal tumor was found to be a malignant adenoma. Considering the extreme rarity of primary adenoma of the ovary, the author is inclined to pronounce the ovarian tumor a metastasis of the intestinal tumor. He emphasizes the clinical importance of this observation, because the secondary tumor was the larger one and kept a more prominent position in the symptomatology of the case. In his opinion the ovaries were affected by direct implantation from the diseased peritoneum.

Demonstration of a Small Metastatic Ovarian Carcinoma in a Case of Primary Carcinoma of the Pylorus.—GOTTSCALK (*Zeitschr. fuer Geb. und Gyn.*, vol. xlv, p. 474, 1901).—Patient, twenty-eight years old, was sent for gynecological examination by a colleague who had failed in treating indistinct stomach troubles of the patient. A small hard nodule was felt attached to the right ovary; some other nodules were found in Douglas' pouch. On account of the formation of the tumor and its hardness, a diagnosis of carcinoma of the ovary was made and operation decided upon. Incision through the posterior fornix. When the peritoneal cavity was opened a small quantity of bloody ascitic fluid emptied. The right ovary and the small tumors lying in front of the rectum were extirpated. Patient felt, after the operation, so well that she escaped from the hospital five days after operation. Several weeks later she was admitted to another hospital, emaciated, with considerable ascites. She died. At the necropsy a primary carcinoma of the pylorus was found, with metastases in the liver, in the abdominal lymph glands, and scattered all over the peritoneum.

On the Apparently Primary, in Reality Secondary, Formation of Cancer in the Internal Genitalia in Cases of Tumorfaction in Other Abdominal Organs.—C. ROEMER (*Arch. fuer Gyn.*, vol. 66, p. 144, 1902).—The author reports two cases of carcinoma of the stomach, with formation of metastases in the ovaries. In both cases metastases were found in the uterus; in one also in the tubes. Based upon a very minute microscopical examination of the specimens, and a consideration of similar cases recorded in literature. Roemer concludes that in both cases the primary cancer of the stomach first led to the formation of metastases in the peritoneum. The latter infected the ovaries by direct implantation. From there the cancer was disseminated by way of the lymphatics in the one case into the substance of the uterus, in the other case into the uterus, broad ligaments and tubes. The probability of the direct infection of the ovaries by means of dis-

seminated cancer particles is proven by the fact that in these cases usually a great number of small metastases are found in the cul-de-sac. The practical conclusion to be drawn from this occurrence, which is by no means rare, is that every operator who is called upon to extirpate an apparently uncomplicated ovarian cancer will have first to search carefully for tumors in other abdominal organs.

[An abstract of an article entitled "The Formation of Metastases in the Ovaries in Cases of Primary Carcinoma of Other Abdominal Organs," by E. Kraus, can be found in the February number of this journal, p. 94.—ED.]

On Metastatic Ovarian Carcinoma in Cases of Carcinoma of the Stomach, Intestines and Other Abdominal Organs.—F. SCHLAGENHAUFER (*Monatschr. fuer Geb. und Gyn. Ergaenzungsheft*, 1902).—In this essay the histories of eight cases are given, in which in the same patient carcinoma of the stomach and carcinoma of the ovaries was found. In all these cases the author was able to prove that both carcinomas were of the same type, and in all eight instances, both from the clinical symptomatology and the pathologic-anatomic findings, the fact was established that the primary seat of the cancer was the stomach, the tumors in the ovaries being metastases.

Including these eight cases, there are now seventy-nine unimpeachable cases on record of formation of metastases in both ovaries in cases of cancer of the stomach, intestines or other abdominal organs, in sixty-one of which the stomach was the primarily affected organ. From a careful study of all these cases, and the literature of this subject, the author arrives at the following conclusions: A great part of bilateral, in most instances solid, ovarian tumors are carcinoma and are of metastatic origin. The cases of so-called combination of malignant ovarian tumors, with tumors of the stomach, intestines or other abdominal organs, are to be considered as metastases and primary tumors. If mamma, uterus and vagina can be excluded, the primary tumor is to be looked for in the stomach, intestines or bile ducts. The histological character of these metastatic ovarian tumors is varying according to the character of the primary cancer. A confusion with endotheliomas and Krukenberg's tumor is possible. In every case of bilateral solid ovarian tumor a careful examination should be made of all the abdominal organs, especially of the stomach. Vomiting and ascites are in these cases symptoms of considerable importance.

Small Cystic Degeneration of the Ovaries in Its Relation to the So-Called Hydrops Folliculi.—C. VON KAHLDEN (*Ziegler's Beitræge zur Path. Anatomie*, vol. xxxi).—A careful microscopical study of a great number of small cystic degenerated ovaries led the author to the conclusion that this condition is the outcome of two distinctly different pathological processes. In one part of the cases, in conformity with the generally prevailing view, the condition was found due to the formation of hydrops in unruptured follicles. In a great number of cases, however, the author succeeded in proving that the small cysts had developed in new-formed adenomas. He observed the incursion of solid masses of the germinal epithelium into the stroma of the ovary. These epithelial cones soon became hollow and filled with a cystic fluid. The process may be well defined as a benign form of multiple adenocystoma.

The results of Kahliden's investigation bring about a better understanding of the etiology and pathological anatomy of the so-called hydrops folliculi, regarding which there is still prevailing a considerable dissension of opinion.

Involvement of the Ovaries in Epidemic Mumps.—J. V. TROITZKY (*Russkii Vratsch*, St. Petersburg, April, 1902; *Rev. Jour. A. M. A.*, May 31, 1902).—The author found that the genital glands were affected by the mumps infection in

thirteen out of thirty-three little patients. The region of the ovaries was sensitive to pressure and more or less painful, and he suggests that possibly mumps may be responsible for some of the pathologic changes observed in the ovaries in later life. He recommends that the region should be investigated in girls suffering from the mumps and local measures applied at once at the slightest symptom of inflammation of the ovaries or their environment. By warding off or dispelling inflammation in the early stage we can safely assume that the ovaries will pass unscathed through the disease.

Microscopical Examination of Uterine Scrapings.—VAN DER HOEVEN (*Centralbl. fuer Gyn.*, May 31, 1902).—In a report before the Netherland Gynecological Society the author gives the very interesting and instructive results of three hundred and eighty-one microscopical examinations of uterine scrapings. There were one hundred and five curettments after abortion, one hundred and thirty-five for diagnostic and one hundred and forty-one for therapeutic purposes. In the first mentioned one hundred and five curettments after abortion deciduoma was detected unexpectedly in two instances. In the one hundred and thirty-five scrapings examined for diagnostic purposes, deciduoma was sought for eight times; it was found three times, besides once unexpectedly, making a total of six deciduomas in three hundred and eighty-one examinations. Tuberculosis was sought for twice; it was found in one case unexpectedly. In one hundred and twenty-five cases of suspected carcinoma, epithelioma was found three times, carcinoma glandulare five times, sarcoma twice, suspicious adenoma three times, making a total of ten malignant cases in one hundred and twenty-five examinations.

In the one hundred and forty-one curettments for therapeutic purposes, in one instance a deciduoma was detected, in another a tuberculosis.

ORTHOPEDICS.

IN CHARGE OF

MALVERN B. CLOPTON, M. D.

Absence of the Trapezius as a Cause of Congenital Elevation of the Scapula.—W. KAUSCH (*Mitteilungen a. d. Grenzgebieten der Med. und Chir.*, Band ix, Hft. 3).—The series observed were five cases, in three of which the defect was unilateral, only the upper portion of the trapezius remaining; in two cases the deformity was bilateral, one of these latter showing a remnant of the upper segment of the muscle on each side and the other an entire absence on one side, while the middle portion of the trapezius remained on the opposite side. As the upper portion of the trapezius is so placed that it can produce the deformity, the author believes that as in all other paralytic deformities from overbalance of muscular power, so in the shoulder the scapula is drawn up by the remnant of the trapezius. This defect of muscle has been noted before but never considered as a cause of the deformity.

The scapula is frequently deformed in its outline, and the upper angle is often tilted forward. Exostoses occur along the posterior border in twenty-five per cent. of cases. Scoliosis is present in all the reported cases. Operation was done on one of these five cases by dividing all of the structures that bind the posterior border of the scapula, replacing the misplaced bone. The result after two years was worse than the original deformity, and the shoulder could not be used as freely as previous to operation. The treatment recommended is gymnastics and massage, with a jacket that holds the scapula in place.

Unnoticed Fractures in Children.—F. T. COTTON and R. H. VOSE, Boston (*Boston Medical and Surgical Journal*, cxlvi, No. 2).—The cases tabulated are those which may be readily overlooked because of relative absence of symptoms, when the diagnosis could only be made by the use of the X-ray. In children, fractures show disproportionately little pain or reaction, which is hard to explain, and this is true not only of greenstick, but also of complete fractures. There is usually some difference in the use of the limb, apart from pain, and some reflex muscle spasm. After weeks it is likely to show a small ring like callus and local tenderness. They may be one of cases of "sub-periosteal" fractures, when crepitus at times can be elicited. Ten cases of unrecognized clavicular fractures, two of the forearm, two of the tibia, one of the fibula, three of the metatarsal bones, are given.

Pneumococcus Arthritis, with Notes of Seven Cases.—NATHAN RAW (*British Medical Journal*, 1901, vol. ii, pp. 1803-4).—As the pneumonia is only one of the manifestations of the blood-born pneumococcus infection, it is understood that other lesions are just as important, and some of these, particularly the simple synovitis or violent purulent arthritis, demand immediate surgical treatment. Out of eight hundred and seventeen cases of acute pneumonia, seven cases were complicated with arthritis, six were suppurative and one serous; four patients recovered, three died. The pneumonias and joints involved were all right-sided. The knee was affected three times, the shoulder twice, the sterno-clavicular joints twice, and the ankle in one of the latter cases. The joint affection may precede the lung symptoms or follow the crisis. The treatment is early evacuation which was followed in all cases.

Three Cases of Paralysis of the Serratus Magnus and the Trapezius—Alæ Scapula.—AUG. A. ESHER, M. D. (*Journal A. M. A.*, February 1, 1902).—The cases include one in which, after an operation in the Trendelenburg position, the patient developed a paralysis of the trapezius and partial loss of function of the serratus on the right side. The scapula was displaced inward and backward—"winged"—and there was great difficulty in bringing the shoulder and arm toward the head or opposite side. The condition was considered to be due to inflammation of branches of the spinal accessory or of the cervical plexus and the long thoracic.

The second case was in an hysterical man with torticollis, who, on two occasions, had his spinal accessory operated. In this patient the trapezius and spinal accessory were paralyzed, as well as the sterno-mastoid. The deformity was hardly as great as in the first case.

The third case of the series was one of deformity of the scapula following diphtheria. This bone stood off from the chest when the shoulder was elevated. There was inability to lift or carry weights. The trapezius and probably the serratus were paretic. The nerve supply of these muscles is thoroughly discussed.

The Effect of Footwear Upon the Form and Usefulness of the Foot.—PHIL HOFFMAN (*Courier of Medicine*, June and July, 1902).—The writer calls attention to the common practice of toeing out, which is faulty, and urges the correct position of direct forward pointing of the great toe and foot as that of the greatest mechanical efficiency. When the foot is pointed outward the foot becomes everted, the strain falls on the ligaments, and the arch is lowered. In the statuary of the ancients, in sandal or moccasin-wearing races and in young children, the foot is carried directly in front, the space across the toes is broad, and each digit is separated from the others, and the inner border of the foot is a straight line. Shoes deform, particularly, by crowding the toes, causing overlapping, hallux valgus, ingrowing nails and hammer toe. High heels lead to the short-

ening of the calf-muscles, which, preventing full dorso-flexion in the straight walk, compels pronation and subsequent breaking down of the bone arch, and if combined with narrow toes may, by throwing additional weight on the metatarsal heads, break down the anterior arch, metatarsalgia subvening. Tight shoes, by splinting the feet, interfere with the normal muscular activity. Ill-fitting and deforming shoes are not always the direct source of pain which makes them dangerous. The shoe is what is admired and not the foot, and custom has dictated a faulty shoe. The article is fully illustrated with excellent cuts and many important points in footwear are brought out.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

The Treatment of Summer Diarrhea.—C. G. KERLEY (*Archives of Pediatrics*, June, 1902) points out that in these cases we have to do with an infection, a poisoned child. The first indication is therefore to remove as much of the intestinal contents as possible. For this purpose, castor oil (or broken doses of calomel frequently repeated, if there be vomiting), should be given.

The greatest number of cases of this sort occurs in children under two years of age, who take milk in some form. Regardless of the source of the milk or its treatment, it must be stopped at once, because milk offers a favorable putrefactive medium for the growth of the bacteria causing the disease. This applies even to breast-fed babies, though here, as a rule, the milk need not be withdrawn for so long a period as in the case of artificially fed babies.

For substitute feeding the author prefers a carbohydrate diet. A tablespoonful of Robinson's barley to the pint of water, boiled for one-half hour, or an equal quantity of whole rice, boiled for three hours, will make an acceptable food. For older children the proportion of cereal may be increased. In addition small quantities of chicken, beef and mutton broth may be given to advantage. The author does not believe in the routine administration of alcohol. He has practically abandoned the use of egg albumen water, because it is so often not digested. Boiled water is given at any time. If possible the substitute diet should be given at such times and in such quantities as the child takes of milk in health. Frequent spongings are of value, and there should be an abundance of fresh air. Of drugs, besides those mentioned, the author prefers the subnitrate of bismuth. In order to be of service the sulphide of bismuth must be formed, producing black stools. At times it is necessary to add *lae sulphur* (in one grain doses) to the bismuth. Opium, though of service, should be used with caution. It is indicated when the stools are eight to ten in number, and large and watery. It is given preferably in the form of Dover's powder, one-fourth to one-half grain every two or three hours for a child of one year. If heart stimulants are necessary, strychnia and strophanthus are employed.

Irrigation of the colon with normal salt solution is of value when the stools are infrequent and contain much mucus and blood. In the algid cases, with extreme prostration, an irrigation of hot salt solution (110°) is a decided stimulant.

The return to milk food should be gradual, using milk diluted with barley water, and no milk is to be given till the temperature falls and the stools approximate the normal.

A Contribution to the Subject of Infant Feeding.—DESSAU (*Medical News*, May 31, 1902).—He reviews the modern methods of infant feeding, calls attention to the fact that in attempting to obtain a substitute for human milk, we should seek to benefit the masses and not the classes alone.

Therefore the method of modification advised should be within the reach of the purse and the intellect of the masses of the community. He denies that the physiological process of digestion and assimilation can ever be reduced to the exactness of a mathematical calculation.

He is of the opinion that the best of all foods for the human infant, during the first year of life, is human milk.

And he believes that the profession should make every effort to have mothers nurse their offspring, or provide a wet nurse when one can reasonably be afforded.

If a substitute must be used, he prefers cow's milk, diluted with water, according to age and digestive capacity of the infant. Sometimes, not always, he uses the "top milk." A pinch of salt and a heaping teaspoonful of raw cane sugar to the quart are added. The mixture is placed in a double cooker, with cold water in the outer vessel, and allowed to remain on the fire for ten minutes after the water has begun to boil (virtual Pasteurization). Ordinarily for infants under three months of age, he uses equal parts of water and milk; for older children, one part of water to three of milk. Gruels may be used as diluents, if they have been previously dextrinized.

The use of the gruels as diluents is particularly indicated for short periods after attacks of intestinal disturbance.

The author claims excellent results for the method, and insists that it is just as scientific as the theory "that a fac-simile of human milk may be obtained by any arrangement of the various elements of cow's milk based on the percentage of fat or cream, which is the only element possible to estimate accurately in a ready manner outside of a chemist's laboratory, the remaining estimates being made by a mathematical calculation."

Diabetes Mellitus in a Child.—STERN (*Archives of Pediatrics*, June, 1902) reports a case in a child of four. From his study of the subject he concludes:

1. Diabetes occurs but rarely before the fifth year.
2. In a majority of cases the child succumbs within a year from the onset of the disease.
3. The disease may remain latent for a time, and then suddenly take an acute course. It may be ushered in by acute febrile disease.
4. The diet should be a proteid, fat one, the carbohydrates must be diminished, though some clinicians do not favor as strict an anti-diabetic regimen as is recommended in adult life.

Concerning Serum-Exanthems After Antitoxin.—RITTERSHAIN (*Jahrbuch fuer Kinderheilk.*, vol. 55, p. 542, May, 1902) has collected all cases occurring in the Prague Hospital for the years 1898-1901, inclusive. In 1224 injections there were seventy-nine children affected (6.4 per cent.). Comparison with the figures of authors for previous years would show a decrease in the incidence of the eruptions. The eruptions would appear to depend largely upon the kind of serum used, though there would appear to be some relation between the amount of serum used and the appearance of the eruption. In seventy-two per cent of affected cases the eruption was general.

Of the local eruptions, nearly all occurred early and were evanescent.

Usually there was little or no exacerbation of temperature.

For the general eruptions, the third, fourth and sixth day after injection seemed to be the times of predilection, though some did occur much later. The eruption lasted from one to five days with, in some cases, slight febrile reaction.

Concerning the character of the eruption, the author states that all varieties hitherto described were found. These are: (1) simple urticaria; (2) scarlatiniform erythema; (3) measles, like exanthem; (4) polymorphous exanthems.

Author lays special stress on the difficulty of differentiating the scarlatiniform eruptions from true scarlet fever, at times.

Acute Leukemia with Hypertrophy of the Thymus in a Child of Four.—ROCAZ (*Rev. Mens. des Maladies de l'Enf.*, March, 1902) reports this unusual case. The child was brought to hospital for a follicular tonsillitis. This cleared in three days, but a fever persisted. The child now developed typhoidal symptoms, with moderate splenic enlargement. On the sixth day a Widal test was positive. Within four days, however, the spleen had increased in size very markedly. A blood examination was now made.

Reds, 1,816,800.

Whites, 244,900.

Differential count showed ninety-six per cent lymphocytes. No myelocytes, no nucleated reds, no eosinophiles.

The spleen continued to increase in size rapidly, and there ensued marked enlargement of all lymphatic glands. Distinct signs of enlargement of the bronchial lymph nodes were present. The fever persisted, diarrhea and general weakness increased; child died on the twenty-fifth day.

At the autopsy the classical picture of leukemia was found, together with marked hypertrophy of the thymus. This organ was four inches in length, and four and four-fifth inches in diameter at its base. No typhoid ulcerations found.

Author calls attention to the onset of the condition with an angina, characteristic of this affection according to Ebstein.

He also notes the association of enlarged thymus; in several cases of leukemia in children with hypertrophy of the thymus, the course of the disease has been exceptionally rapid.

Treatment of Scarlet Fever.—GROSZ (*Archiv fuer Kinderheilk.*, vol. 34, p. 52, May, 1902) gives a review of one hundred and sixty-eight cases of scarlet fever treated in hospital during two years. All patients were kept abed for three weeks. If by that time there was no albumin in the urine, and if no other complications had arisen, the patient was allowed to be up.

No antipyretic measures were taken unless the fever was high; in that case cold packs were used systematically. In severe cases, where the heart's action was not good, stimulants were used—camphor, caffeine, sodio-salicylate and alcohol.

Careful examinations of the throat were made routine procedure. In ninety-three cases of severe necrotic scarlatinal angina, the Klebs-Löffler bacillus was found only four times. The clinical picture in these cases was that of diphtheria; under antitoxin they all recovered.

The severe septic scarlatinas were almost uniformly fatal.

For the treatment of scarlatinal angina, ice compresses to the neck, sprayings of the throat with three per cent boric acid or one per cent chlorate of potash were used. Stronger solutions were not used.

With reference to scarlatinal nephritis, the author is of the opinion that it occurs even in patients confined to bed and on strict milk diet. He regards its occurrence as a direct effect of the infection. For its treatment he uses milk diet, and adds digitalis or diuretine pro re nata. Hot baths are also used.

The treatment of the uremic attacks, in addition to the measures mentioned, was symptomatic.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

Pseudo-Meningitis of Psychical Origin.—STARCK (*Deutsche Zeitschr. fuer Nervenheilkunde*, Nos. 5 and 6, 1902).—There have from time to time been reported cases which showed symptoms of meningitis and post-mortem examination gave no evidence that meningitis had existed at all. Three such cases were reported by Schultze in 1887, and he gave to them the name of pseudo-meningitis. Krannals published seven cases of a like nature, and others are mentioned by Kohts, Strumpell, etc. The nature of these symptoms has as yet remained unexplained except on some theory of a toxic process. As opposed to this variety, which frequently ends in death, is another which has been recognized by the French ever since 1870, and is called also pseudo-meningitis, but it differs from the first in that death is not produced and that its etiological factor is without doubt psychical in nature. This latter form is called by the author psychical pseudo-meningitis. There is little doubt that many cases of so-called cured meningitis, where no serious brain lesion is left behind, belong to this class and remain in the literature merely as examples of false diagnosis. Starek, in this very suggestive paper, relates such a case in great detail and makes of this variety of meningitis a definite clinical fact, which in the future should always be considered in all cases of meningitis where there is doubt about the diagnosis, especially so in those cases of meningitis which run their course without a temperature. The case in brief is as follows: To illustrate the difficulty in diagnosis of the case, the diagnoses had been made in various hospitals and clinics as tuberculosis, epidemic meningitis, cerebral tumor, acute hydrocephalus, traumatic tetanus, caries of the spine, and for the latter an operation of laminectomy had been done. A merchant, thirty years old, came into the hospital with a history of headache and vertigo which had lasted eight days. There was also pain in the back, vomiting, chills, contraction of the muscles of the neck. Physical examination showed the patient to be immovable in bed, passive motion of the slightest extent causing great pain. Every few minutes there were tetanus-like convulsions accompanied by cries of pain. The eyes were closed, but there were no eye-muscle paralyses; the pupils reacted to light. All reflexes, superficial and deep, were greatly increased; there was a patellar clonus and a dermatographia of marked degree. Some trismus. Pulse regular, but no fever. A provisional diagnosis of acute meningitis, probably tubercular in origin, was made. In the next few days the convulsions increased in number and in violence, while the patient seemed to sink into a stuporous condition, out of which he could not be aroused. It must be readily admitted that the diagnosis of meningitis seemed to be amply justified. The one suspicious fact was the lack of a rise of temperature. At the suggestion of Erb, the case was again examined with a view of eliminating hysteria or simulation. The patient was hypnotized and under suggestion all the symptoms completely disappeared, the patient walking into the ward, apparently fully recovered. Subsequently the patient was carefully examined for hysterical stigmata, but none were found. The record of this same patient, as found in the various hospitals where he had been treated, are noted by the author, and from them he concludes that he had to do with a psychically abnormal individual who at times through deception, and at others by unintentional psychical means, was in a position to imitate an organic disease so perfectly that its true interpretation escaped the diagnostic powers of several eminent internists. It was also ascertained that this patient had been a nurse in a hospital and had seen many cases of meningitis. These had so impressed themselves

upon his mind that a reproduction of them was an easy matter. A careful review of the literature, as well as a thorough discussion of this case, make this paper extremely interesting and suggestive.

The Tube-like (Roehrenfoermige) Field of Vision in Hysteria.—R. GREEF (*Berl. Klin. Woch.*, No. 21, 1902).—The central limitation of the visual field in hysteria is one of its most reliable diagnostic signs. Greef describes the field of vision in a case of hysteria in a young child and compares it to the field of vision that would be present when one looks through a hollow tube. This is a very apt comparison and describes better than words can the peculiar appearance of this hysterical symptom. He mentions some of the peculiarities of this form of visual defect and notes that in no other condition is a similar phenomenon observed, so that in the presence of this the diagnosis of hysteria is justified. The acuity of vision in the case quoted by Greef was almost normal, in spite of the marked concentric narrowing of the field. This in itself is pathognomonic of hysteria, because there is no known eye condition which would produce such an intense limitation of the field of vision with a normal ophthalmoscopic finding. A second interesting peculiarity consists in the fact that when the examining distance is increased the patient's field of vision does not increase in proportion to the angle thus formed, but remains contracted as before. This fact might be of very great importance where there was a question of simulation. In this case, also, a definite venous and arterial pulse could be observed in the papilla. This is probably due to the abnormal irritation of the whole arterial system, as no vascular disease was found.

Acute Ascending Paralysis in Basedow's Disease.—M. ROSENFELD (*Berl. Klin. Woch.*, June 9, 1902).—Charcot was the first to call attention to the paralytic symptoms found at times in this disease. They consisted chiefly in weakness and giving way of the legs, a phenomenon which is sometimes found in tabes. This condition can become so exaggerated that total paraplegia results. No sensory or bladder disturbances accompany it. In all about forty examples have been observed and recorded. This is a description of such a condition in a young man, nineteen years old, in whom evidences of Basedow's disease had existed for one year. After a prodromal stage of three days, during which he complained of pain in the back and weakness in the legs, a paralysis of the right extremity took place with complete loss of the knee-jerk; this developed with symptoms of collapse. The other leg, the muscles of the trunk, the arm and neck muscles were in turn affected. Sensation was not disturbed. The diaphragm was not affected. After twenty hours the paralysis began to disappear, leaving behind great muscular weakness. There was no evidence of hysteria. The same process repeated itself twice within a few days, but not so marked as the first time. After this the symptoms of Basedow's disease became more pronounced: tachycardia, acute exophthalmos, acute thyroid enlargement, sweating, emaciation and delirium. The etiology of this phenomenon is without doubt toxic in nature, and attention is called to the fact that Lemke believes that the toxic substance of the thyroid gland must be considered as a muscle poison.

A Parasite Found in the Blood of Epileptics.—M. BRA (*Revue Neurologique*, May 30, 1902).—This is a further communication concerning the presence of a parasite found in the blood of epileptics by Bra, communicated to the Academy of Science of Paris, January, 1902. Blood examined in the interval between the attacks has always been found to be negative. It is present just preceding an attack and during it. The parasite is a diplococcus. It was isolated seventy times in one hundred. It was also possible to cultivate it on various media and to inject it into the blood of rabbits, whereupon convulsions resulted. The

name of neurococcus is given to it by the author. According to him, this is the probable causative agent of epilepsy, and forms a strong proof of the toxic origin of this disease, a theory that Pierre Marie has held on theoretical grounds for fifteen years.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. MCC. JOHNSON, M. D.

The Surgical Treatment of Bright's Disease.—GUITERAS (*N. Y. Med. Jour.*, May 17, 1902).—The literature of the subject from Harrison's cases of improvement in albuminuria from nephrotomy, published in 1896, to Edebohls' recent articles is considered; and the conclusion is drawn that to Edebohls is due the credit of having first performed an operation upon the kidney for the sole purpose of curing chronic Bright's disease. The author has begun collecting data with a view of establishing what proportion of cases of Bright's disease are unilateral. Edebohls suggests that the improvement in the kidney after the surgical intervention is due to the growth of new blood vessels connecting the kidney with the surrounding tissues, and thus an improved blood supply. Guiteras has begun to work out the experimental side of this question.

The author reports three personal cases of surgical intervention. The first was in a man seventy-nine years old with chronic nephritis and prostatic hypertrophy. Both kidneys were operated upon. One month after the operation the patient's urine showed improvement, and even his prostatic symptoms had all disappeared. The second was in a woman thirty-five years old with nephritis in a movable kidney. The operation was performed but two weeks previously, and while she was progressing favorably, it was too early for deductions. The third case was one of edema, with many casts and much albumen in the urine. Chloroform was used as an anesthetic, and just as the first cut was made, the patient's heart became so weak that the operation was suspended, and even then there was great difficulty in reviving the patient.

The author concludes:

1. That nephropexy is always a beneficial procedure in a movable kidney of a patient suffering from chronic nephritis.
2. That nephrotomy has proved a valuable operation in unilateral chronic nephritis associated with hematuria and nephralgia.
3. That the value of a complete decapsulation of the kidney as a therapeutic measure in chronic Bright's disease has not as yet been determined.

Grippal Hemorrhagic Cystitis.—BRETON (*Gazette des Hopitaux*, May 13, 1902).—Three cases are reported. The common symptoms of constitutional grippé, after having lasted four or five days and apparently letting up, were followed suddenly by symptoms of cystitis and hematuria. The blood was from the bladder. There were no kidney symptoms. With rest in bed and the ordinary treatment of cystitis the hematuria ceased in from three to nine days. For a few days subsequently the urine contained muco-pus, gradually becoming normal.

A New Substitute for Silver Nitrate.—BARNES and HILLE (*Med. Rec.*, May 24, 1902).—The new combination, *silver vitelline*, is unique in that it contains thirty per cent. of silver, twice the amount of any proteid silver heretofore produced, and is extremely soluble. From experiments it is evident that this salt will exert the antiseptic effects of silver in the deep submucous structures. In

sixty-four out of sixty-six cases of acute gonorrhea in which a one-per cent. solution was used, the unpleasant symptoms were done away with entirely, the amount of discharge was markedly diminished from the start, gonococci were greatly reduced in numbers, and the course of the disease shortened. Solutions of the salt are of decided benefit in deep urethral inflammations and cystitis, even a five per cent. solution producing no irritation.

Albumen in the Urine—A New Way of Applying Nitric Acid and Other Reagents.—BOSTON (*N. Y. Med. Jour.*, May 24, 1902).—The method is as follows:

(1) A pipette is filled for a distance of from one inch to one and a half inches with the urine to be tested. Then this pipette is either carried under a stream of water, and then dried by a towel, or all urine is removed from its surface by a damp towel.

(2) This pipette, with its contained urine, is placed near the bottom of a bottle containing pure nitric acid, when the pressure of the index-finger is lessened, and the acid allowed to flow gradually up into the pipette.

(3) When the pipette is seen to contain about the same amount of the acid and of the urine, the finger is again pressed firmly and the pipette removed from the bottle, and held towards the light, and if albumen is present, a distinct white cloud in the form of a ring appears at the zone of junction of the urine and the acid. If heat is desired, the nitric acid may be heated in a test tube before using. The author finds the nitric acid contact test for albumen (the acid being used pure or as in Robert's nitric magnesium solution) the most satisfactory of all

Eight Cases of Tumor of the Testicle.—SCUDDER (*J. Cutan. and Genito-Urin. Diseases*, June, 1902).—The cases were operated upon at the Massachusetts General Hospital by different surgeons. The operations, microscopic diagnosis, and result follow:

1. Orchidectomy. Myxosarcoma. Five years afterwards the man is well and in good health.

2. Orchidectomy. Myxosarcoma. Five and a half years afterwards the patient is well and strong.

3. Orchidectomy. Round-celled Sarcoma. Three years afterwards the man is well and in excellent health.

4. Orchidectomy. Round-celled Sarcoma. Two and a quarter years afterwards the man is well and in good health.

5. Patient had undescended testis. Recent tumor near inguinal canal. Tumor removed, but was adherent posteriorly. Round-celled Sarcoma. Patient died seven months later. The spinal column became involved in a similar growth.

6. Orchidectomy. Adeno-carcinoma. Two years afterwards the man is well and in good health.

7. Orchidectomy. Cysto-sarcoma. One year and three months later the man died. New growths are over the body and in spleen and liver.

8. Orchidectomy. Teratoma. Six months afterwards the patient died.

The Surgical Treatment of Prostatic Hypertrophy.—CHETWOOD (*N. Y. Med. Jour.*, May 31, 1902).—After discussing, when to operate, the choice of operation, and the extent of the operation, and considering the literature, especially of the last year, the author proceeds to explain his method of operating and his galvano-cautery incisor. He first makes a perineal incision into the urethra, then introduces his finger into the bladder for diagnostic purposes. His galvano-cautery incisor is now introduced, and incisions into the prostate made as may seem required. The incisor is very much on the order of Young's modified Freudenberg-Bottini instrument. Seven cases of operation with favorable re-

sults are reported. The author believes that in the large majority of cases the requirements of any operation upon the prostate consist in the removal of the obstructing area and depressing the bladder opening into the prostate, so that the *bas fond* may be properly drained. In many cases the obstructing area of the hypertrophied gland can be satisfactorily reached and effectually removed through a perineal opening by means of galvano-caustic incisions.

The Use of the Cautery of the Prostate Through a Perineal Opening; New Method.—WISHARD (*J. Cutan. and Genito-Urin. Dis.*, June, 1902).—The perineum is opened under local anesthesia, and the prostate cauterized by means of Wishard's instrument, which is quite elaborate, admitting of the work being done under the direct inspection of the eye in a bladder distended with air. Four cases with favorable results are reported.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Parapsoriasis.—L. BROcq (*Annales de Dermatologie et de Syphilographie*, May, 1902).—Parapsoriasis is a word applied by Brocq to a group of affections which are known under various names. In this essay he has gone carefully over the German, English, American and French literature, has taken these various rare conditions, and has placed them in this group; by the word "parapsoriasis" he means to designate a group of rare dermatoses which seem to make a passage, as it were, between psoriasis, the seborrheides, psoriasiformis and pityriasiformis on the one hand, and lichen planus on the other. These conditions have been described by Unna under the name of parakeratosis variegata; by Jadassohn under the name of exanthem d psoriasiforme et lichenoide and dermatite psoriasiforme nodulaire; by Juliusberg, pityriasis lichenoide chronique; and by Brocq himself, erythrodermies pityriasique en plaques disseminees; by Radcliffe Crocker, lichen variegatus. These dermatoses seem to gradually shade into one another and make a chain leading from lichen to psoriasis. Their general characteristics are long duration of the process, little change in the general health, the absence of pruritis, the superficiality of the processes, constituted by a variable redness of the skin, a pityriasic desquamation of the epidermis, and their extraordinary resistance to medication.

Histologically they are characterized by an infiltration of round cells, the papillary vessels are dilated; there is a superficial edema in the derma and epidermis, the processes are flattened; an intercellular edema, especially is this marked in the granular layer. The germinal layer is almost completely absent. The author divides parapsoriasis into three forms: 1. Parapsoriasis en gouttes, which consists of small macules or squamous papules, isolated, disseminated and without infiltration, resembling a psoriasis en gouttes. 2. Parapsoriasis lichenoide, which is composed of small brilliant pseudo-papules, are superficial, and form by uniting into plaques and patches, bizarre figures which are characteristic, described by Unna and Crocker. This group more readily resembles the lichens. 3. Parapsoriasis en plaques, which is closely bordering upon psoriasis and the seborrheides. This consists of reddened, squamous, circumscribed plaques of 2 to 6 cm. in diameter, disseminated over the integument. Brocq thinks he sees a distinct homogeneity in all of these groups, and it is fortunate if this proves correct, as it brings together into one class several conditions about which there

lately has been a great deal of discussion, especially in America, England and France.

Researches Upon Malignant and Grave Syphilis.—LOCHTE (*Monatschrift f. Prakt. Dermatologie*, 1901, pp. 485, 537 and 589; *Annales de Dermatologie et de Syph.*, May, 1902).—Lochte affirms that malignant syphilis is characterized by the following symptoms: Appearance of precocious ulcerations upon the body, diminution of physical forces, run-down appearance, diminution of the appetite, insomnia, perhaps continued fever, inefficiency of mercurial treatment. In the last five years the author has found, out of 3,270 cases of syphilis in men, 17 of the malignant type, but not a case in women. The primary lesions, or first eruption in cases of malignant syphilis, do not often present a grave character, but most frequently seen in the tertiary, when iodides are most efficacious. Alcoholism, advanced age, poverty and misery are aggravating causes. The chancre has a tendency to phagadema, the syphilides are of malignant character, often pustular, hemorrhagic with a tendency to recur.

Baldness: Its Causes and Treatment.—S. JESSNER, M. D. (*Merck's Archives*, June, 1902).—Jessner divides baldness into five varieties, namely: First, Alopecia adnata, senilis and prematura; second, Alopecia seborrheica; third, Alopecia mycotica; fifth, Alopecia symptomatica.

The first variety is congenital baldness; the hair may or may not make its appearance later in life.

The alopecia senilis is a physiological process, no pathological process being present, but in premature alopecia care must be taken in the diagnosis, as seborrhea may be present.

In the second variety, seborrheic alopecia, it is most important to detect a beginning of the process or a mild seborrhea. He quotes Pohl-Pincus, who gives the following directions: Falling of hair is preceded by diminished growth of the hair in length. The fact may be ascertained in women, in case they do not burn the ends of the hair, by examining every day the hair coming away in combing. If the number of removed hairs which are less than six inches long constitutes more than one-fourth part of all the hair coming away with the comb, it is a sign that a pathological process is taking place in the scalp. In men the method is simpler: we only have to look for the cut hairs in the daily waste, and if they are numerous, the hair is "falling," since normally the newly growing hairs remain on the head up to time of "shearing."

The prognosis of chronic seborrhea is not so hopeless if proper treatment is instituted in time. The treatment of seborrheal alopecia consists in thorough washings of the head with soap and hot water, supplemented in severer cases with the application of antiseborrheal ointments or lotions. Advanced alopecia is treated similarly to alopecia areata.

The secret of success lies in patient and persistent treatment. No cure must be expected in the course of a few weeks' time. Months will elapse before treatment can be abandoned, and even afterwards shampooing at regular intervals will be necessary if the seborrhea is to be held in check.

The third variety includes alopecia areata, for which he recommends the usual line of treatment, especially chrysarobin and the faradic brush.

In the fourth is included the known parasitic alopecias, and the fifth is the alopecia which is the result of external or internal diseases, as syphilis, leprosy, acute infections, etc.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

On Influenza-Pharyngitis and Laryngitis.—TREITEL (*Archiv fuer Laryngologie und Rhinologie*, Dreizehnter Band, Heft 1).—In most cases of influenza we find catarrhal conditions of the upper air passages. According to the statistics of Curshmann the bronchi and nose are most often affected (eighty-one per cent. of all cases), while angina and laryngitis are not nearly so frequent (five per cent. of all cases). In general, the catarrhal inflammations of influenza do not differ from those following exposure. Influenza anginas can become phlegmonous, and edema of the glottis has also been seen. Kronenberg states that there is a tendency to bleeding. There are, however, two symptoms which are prominent in influenza. They are the severe neuralgia in affections of the nose, especially the pain above the eyes, which is, as a rule, due to empyema of the accessory cavities of the nose, and in the pharynx and larynx the paresis of the muscles. Fraenkel saw paresis eighteen times in thirty-three cases. He first called attention to the small, superficial ulcerations in the larynx which occur in influenza, and also called attention to the long duration of these cases of laryngitis. Cohn, in the first epidemic of influenza, saw pseudo-membranous exudation on the tonsils, palate, pharynx, tongue and in the larynx. Other observers described an opalescent appearance of the upper surface of the tongue, which they considered pathognomonic. The main characteristic is the opalescence. It is at times spread over the whole tongue; at other times it is only at the base, while the point is covered with round or oval specks. This condition of the tongue is often seen in the beginning of the disease.

The author saw a case of influenza-pharyngitis which was taken for syphilis. On the tonsils, soft palate and posterior wall of the pharynx there were oval, partly confluent, grayish white masses, which were surrounded by a reddened and swollen mucous membrane. The affection was then of four weeks' standing. Fourteen days later small vesicles appeared on the pillars of the fauces, which, after a few days, became ulcers. A similar condition in the nose and larynx could not be found. The treatment consisted in cleansing with indifferent solutions and a diet of non-irritating food and drink. The affection lasted about three months. Bacteriological examinations were made and the influenza bacilli demonstrated.

A case of influenza-laryngitis was also seen by the writer, in which small, oval, grayish white specks, slightly raised but not opalescent, could be seen on the false cords. Some of these specks were removed by means of cotton on a carrier, and a bacteriological examination revealed large numbers of influenza bacilli. In this case the influenza bacilli were taken directly from the larynx. The lungs in this case were normal. The above is the first instance of the influenza bacillus being taken directly from the larynx. Glatzel reports a case in which he demonstrated the influenza bacillus in the sputum.

The Importance of Lumbar Puncture for the Diagnosis of the Intracranial Complications of Otitis.—BRAUNSTEIN (*Archiv fuer Ohrenheilkunde*, vol. liv).—In order to establish an indication for operation by excluding a diffuse purulent meningitis or a contraindication by demonstrating the above condition to be present, lumbar puncture has been done sixty-seven times in forty-eight patients. The puncture is made in adults between the fourth and fifth vertebra, on the lower edge of the fourth, a one-half cm. from the median line. The needle is pushed forward and upward. In children the lower edge of the spinal process

in the middle line of the second, third or fourth lumbar vertebra may be selected. The needles used for adults were hollow, 13 cm. long, and 1.3 mm. thick. For children ordinary hypodermic needles are sufficient. The puncture is made in the lateral position with narcosis, but strict aseptic precautions must be followed, and special care taken not to decrease the pressure too rapidly. The amount of fluid removed varies between 13 and 70 cm. The fluid in inflammation of the cerebrum and spine and their meninges is turbid and even purulent, due to an increase of leucocytes or an admixture of pus corpuscles and bacteria. In tubercular meningitis the fluid may be clear although containing bacilli. In uncomplicated cerebral abscess the cerebro-spinal fluid is clear but increased. Untoward symptoms, as pain, numbness in the lower extremities, occur after punctures. Four punctures were made without obtaining any results. In one the needle was too short, in another without any ascertainable cause, and in the others were due to a gelatinous condition of the spinal column and edema of the white substance, associated with a diffuse purulent meningitis. In two cases irregular pulse and a chill was observed. Two cases died after puncture. Lumbar puncture, as a means of diagnosis, is of extreme importance, but as a therapeutic agent leaves much to be desired.

Ichthargan—Its Use in Nose and Throat Diseases.—BEAMAN DOUGLAS (*Laryngoscope*, May, 1902).—The author, after considerable experimenting, has found that ichthargan for nose and throat work must be used in preparations from 1-50 to 1-10, but the strength of 1-20 was found best for general use. This produced generally a slight burning and smarting, never enough to amount to pain. It seems to be useful as an anesthetic (this effect is not marked), antiseptic, alterant, antiphlogistic, stimulant, and as a modifier of nasal secretion. Compared with nitrate of silver it may be said to be about one-tenth as irritating, but in strong solutions or as a powder it never cauterizes. It is found most useful in acute catarrhal rhinitis in a four per cent. solution; in cases of hypertrophic rhinitis which are not particularly hyperplastic, and when obstruction results from disturbed circulation. In atrophic rhinitis cases, irrigations with weak solutions, 1-5000, and afterwards applications of 4-10 per cent. solutions in water or glycerine. It is in these cases that it seems to attain its most effective results. The writer has treated at least fifty cases of this kind, and the results with ichthargan have been more satisfactory than with any other form of treatment. In tonsillitis and inflammations of the lingual tonsil, better results are obtained from the other silver salts. Ichthargan is also recommended in diseases of the larynx in from 4-10 per cent. solutions.

A Case of Epilepsy Cured by Operation for Nasal Polypi and Empyema of the Antrum of Highmore.—GROSSKOPFF (*Archiv fuer Laryngologie und Rhinologie*, Dreizehnter Band, Heft 1) reports a case of epilepsy in a youth of twenty, cured by the removal of nasal polypi and the draining of a diseased antrum. The patient had received the bromide treatment and had also undergone a "cure" at a sanitarium without any benefit. He had been having from six to eight epileptic seizures daily and his mental capacity greatly reduced. Careful questioning revealed that he was unable to breathe through the right nostril and only very little through the left. On examination it was found that the right nasal cavity was filled with polypi, between which yellow pus could be seen. The left inferior turbinate was considerably enlarged. The antrum was drained through a socket of the second bicuspid tooth, and later the polypi were removed. While attempting to remove some of the polypi under the middle turbinate the patient was suddenly taken with severe typical epileptic seizure. From that time on (November 18, 1901) he has not had a single attack. The antral supuration was completely cured in about three months. The enlargement of the left turbinate was reduced by the electro-cautery.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

Is the Dislocation of the Lens Into the Vitreous Ever Justifiable?—G. F. LUKER (*The Am. Jour. of Ophthal.*, June, 1902).—From one-fourth to one-half per cent. of all patients presenting themselves for operation are not fit subjects for extraction. These include the insane, epileptic, hemophilic, the extremely aged (?), and those with an incurable cough. Ocular conditions contraindicating extraction are: (1) When one eye has been operated by extract, and has been lost by suppuration. (2) Partial posterior dislocation of the lens with tremulous iris. (3) Shrunken and secondary cataracts.

Subsequent complications of depression includes the "rising up" of the cataract, iritis, irido-choroiditis, ciliary neuralgia, secondary cataract and acute glaucoma.

While admitting that the remote results of depression (glaucoma, etc.) may result in the loss of the eye, Luker is inclined to believe that the operation is justifiable in selected cases.

A Note on the Value of the Fluorescein Test.—A. H. BENSON (*Ophthalmic Review*, May, 1902).—Text-books on ophthalmology are practically a unit in asserting that only corneal tissue which has been deprived of its epithelium (ulcers and epithelial abrasions) is stained green by solutions of fluorescein. With a view to ascertaining more precisely the tinctorial reaction of the cornea to fluorescein, Benson instilled the solution in a variety of corneal conditions, and came to the following conclusions: (1) In sloughing corneal ulcers the stain is yellow. (2) Apparently intact epithelium surrounding ulcers is often stained. (3) Occasionally small areas of intact epithelium take a typical (green) stain. These areas do not, as a rule, ulcerate. (4) Epithelium intact, but damaged by caustic alkalis, acids and heat, stains beautifully. (5) The corneal epithelium of freshly enucleated eyes stains typically. (6) Cocainized eyes stain irregularly ("mottled"). The writer has found that cases of interstitial keratitis without complicating corneal ulceration do not stain, and considers the test of value in differential diagnosis between this condition and certain forms of indolent superficial keratitis.

The staining of the corneal endothelium has been demonstrated in enucleated eyes, but the writer has not been able to satisfy himself as to its occurrence in the living eye.

When an ulcer does not stain it is an indication that the base has been covered by a delicate epithelial pellicle. The process of healing may be precisely observed by noting the constantly decreasing area capable of taking the stain.

Contagious Ophthalmia in Industrial, Residential and Public Schools and in Asylums and Hospitals.—R. H. DERBY (*Med. Record*, July 5th, 1902).—In 1886 an examination of the eyes of children in the asylums and residential schools of New York City showed that one out of every four had contagious eye disease. Many asylums admitted children without compelling them to submit to ocular examination. Frequently children with pronounced ophthalmia were permitted to use a lavatory also used by children whose eyes were still unaffected.

Out of 12,684 inmates 3,862 were found to have contagious ophthalmia. In view of these conditions the New York Legislature was prevailed upon to pass an act providing for the isolation of inmates suffering from contagious or infectious disease. The act was passed in 1886 and has therefore been operative about

fifteen years. A comparison of the figures obtained in 1886 and 1902 show a remarkable diminution in the number of cases of contagious sore eyes. In one institution the percentage dropped from 17.7 per cent to 2.5 per cent, in another from 66.5 per cent to 4.4 per cent.

The system in vogue in two of the institutions which show the most striking decrease in the number of cases of ophthalmia includes a careful inspection of the child's eyes on admission and the immediate isolation of all cases of ocular disease. A building has been constructed for purposes of isolation and it is equipped with everything for the maintenance and instruction of the child. Only after complete cure are the children returned to the main pavilion; even then they wash apart from the other children and are subjected to tri-weekly examinations. No basins or bath-tubs are allowed, each child having a separate jet of water and an individual towel. In accordance with the law, the eyelids of each inmate are everted and examined.

An examination of two public schools in New York City revealed the fact that 17.3 per cent of the children had a communicable disease of the eyes, true trachoma largely predominating. No regular inspection of the eyes was practiced, the discovery of any case of sore eyes being, in the absence of obvious inflammatory signs, largely a matter of chance.

The writer advocates rigid and universal inspection, the examination to include eversion of the lids. The fact that trachoma is insidious and often not manifest at all to casual observation is emphasized.

BOOK REVIEWS.

DISEASES OF THE STOMACH. Their Special Pathology, Diagnosis, and Treatment, with sections on Anatomy, Physiology, Chemical and Microscopical Examination of Stomach Contents, Dietetics, Surgery of the Stomach, etc. By JOHN C. HEMMETER, M. D. Third enlarged and revised edition. P. Blakiston Son & Co., Philadelphia.

The reception with which this special work has met among students and general practitioners of medicine proves conclusively that in its conception the author has struck a popular chord. Few works on special branches can be adapted and applied to general use as can this volume. It is so complete within itself, so logical in its classification, and so explicit on every point, that one cannot help but feel that he has in the confines of this volume the sum and substance of the useful and practical knowledge of the subject in hand. The illustrations are numerous and instructive, the index full and accessible, and the bibliography following each chapter complete.

The first part is devoted to the anatomy and physiology of the digestive organs, and the methods and technics of diagnosis. In this connection are considered in detail the methods for testing the gastric peristalsis, gastroscopy, the diagnostic significance of fragments of gastric mucosa, as well as all of the more usual aids in diagnosis of diseases of the stomach. The author's originality along these lines render him peculiarly fitted to write such a chapter. He was among the first to recognize the great importance of microscopic examinations of fragments of the mucosa removed by the stomach tube or curette, and has contributed much on this subject that has received universal recognition.

Part two is devoted to the consideration of general therapy and *materia medica* of stomach diseases. Dietetics receive chief attention here. Some knowledge may be gained of the masterly way in which the subject of treatment is handled, from the statement that of 230 pages, thirty are devoted to medicinal agents. In his consideration of the uses and abuses of natural mineral waters in diseases of the digestive organs, the author says: "With such a wealth of valuable mineral springs in this country, it is difficult to understand the large annual exodus of Americans to foreign water resorts. We fear the fault rests with the American physician, not the American waters."

Part three is devoted to a complete consideration of the special diseases.

HUMAN EMBRYOLOGY AND MORPHOLOGY. By ARTHUR KEITH, M. D., F. R. C. S. (Eng.), Lecturer on Anatomy, London Hospital Medical College, etc., etc. Illustrated. London: Edward Arnold. 1902.

This book is the substance of a course of demonstrations in embryology given by the author in the London Hospital. The extent to which each subject is dealt with is determined by its practical importance, thus clinical utility being the criterion employed. Each chapter is a brief history of the development of a part of the human body. The book is liberally illustrated and in its concise style is thoroughly adapted to the needs of the student.

DISEASES OF THE ANUS AND RECTUM. By D. H. GOODSALL, F. R. C. S. (Eng.), Senior Surgeon to St. Mark's Hospital for Fistula and other Diseases of the Rectum, etc., etc., and W. ERNEST MILES, F. R. C. S. (Eng.), Surgeon to the Gordon Hospital for Diseases of the Rectum; Assistant Surgeon to the

Cancer Hospital, Brompton, etc., etc. In two parts. Part I. Longmans, Green & Co., London, New York and Bombay. 1900.

As the authors state in the preface, this book is the outcome of their personal experience of the subject, which has extended over periods of thirty years and six years respectively. They convey to the reader the clinical features of the various forms of diseases of the anus and rectum, and set forth only those methods of treatment which they have found in their very extensive experience to be the most successful ones. This first volume contains a consideration of the anatomy of the pelvic floor and deals with the formation of abscesses in the neighborhood of the rectum, the different varieties of fistulæ, hemorrhoids and anal fissure. Ninety-one excellent illustrations, most of them being reproductions of photographs, greatly elucidate the text. The book is a thoroughly modern one and will be found by student and practitioner to be of the greatest value.

DERMATOLOGISCHE HEILMITTEL (Pharmacopeea Dermatologia). By DR. S. JESSNER, Koenigsberg, i. P. A. Stuber's Verlag (C. Kabitsch), Wurzburg. 1902. Price, one mark and a half.

This little book of ninety-four pages amounts almost to a work on cutaneous therapy. The newest dermatologic remedies, their preparation, nature and uses, are fully discussed. The author has also given us the result of his practical clinical knowledge of these remedies by adding numerous formulæ to illustrate the mixtures of which they best admit.

As a reference for the specialist as well as the general practitioner this little volume will prove invaluable. Over two hundred subjects are discussed in a most practical and instructive manner in its pages.

THE PERITONEUM. By BYRON ROBINSON, B. S., M. D., Chicago, Ill. Part I, Histology and Physiology. With 247 illustrations. Chicago: Chicago Medical Book Co. 1899.

Peritonitis is one of the fell destroyers of the race, and he who brings forth means to check its fatal progress will be a benefactor to his fellows. Only a thorough knowledge of the normal functions of the peritoneum, gained by study with the microscope, by the use of reagents and experiments, will enable us to secure methods of combating the invasion of disease into the peritoneum. Everybody who is acquainted with the literature of the last few years will know what the author of this book has done in enriching our knowledge in regard to the histology and physiology of the peritoneum. In many elaborate articles he has brought forth the fruits of his personal labor in experiments and researches conducted during half a dozen years. The present volume compiles the outcome of this immense work. Beginning with a historical sketch the writer deals in the following nine chapters with the histology and physiology of the peritoneum, devoting one chapter for each tissue constituting the peritoneum. The author advances not only his personal opinion but gives everywhere ample credit to the work of others, thus producing a book which must be considered the most complete and most valuable contribution on this subject that has ever appeared. We do not hesitate to predict that the high merits of this book will be recognized and acknowledged not alone in our own country but also abroad.

GENITO-URINARY DISEASES AND SYPHILIS. For Students and Practitioners. By HENRY H. MORTON, M. D., Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospital; Genito-Urinary Surgeon to the Long

Island College and Kings County Hospitals and the Polhemus Memorial Clinic, etc. Illustrated with half-tones and full-page color plates. Pages xii-372. Size 9½x7 inches. Price, extra cloth. \$3 net, delivered. Philadelphia: F. A. Davis Company, publishers, 1914-16 Cherry street.

This is a work of much merit. The author exhibits a keen knowledge of discrimination: what subjects to elucidate extensively and to what to devote only a few lines. While the conditions treated of embrace all those which the specialist encounters, the book is especially valuable to the student and general practitioner.

In addition to the well-established facts, all the worthy new ideas in the department of medicine are clearly given, and at the same time there is a conciseness that is pleasing.

Among the illustrations, which are good and liberal, may be noted not a few reproductions of photographs which enhance the value of the work.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS. Edited by GUSTAVUS P. HEAD, M. D. Divided into ten small volumes; published separately at monthly intervals during the year. The volumes before us are as follows:

General Medicine. Edited by FRANK BILLINGS, M. D. Includes all the general diseases except those of the alimentary tract and allied organs and the summer diseases. 275 pp. Cloth, \$1.50

General Surgery. Edited by JOHN B. MURPHY, M. D. 450 pp. Cloth, \$2.00.

Diseases of Eye, Ear, Nose and Throat. Edited by CASEY A. WOOD, M. D., and ALBERT H. ANDREWS, M. D. 300 pp. Cloth, \$1.50.

Gynecology. Edited by E. C. DUDLEY, M. D. 175 pp. Cloth, \$1.25.

Published by the Year Book Publishers, 40 Dearborn street, Chicago. Subscription price for full set—ten volumes—\$7.50.

The object of this series of small volumes is most commendable. The publishers aim to present the advances made in every department of medicine, each special subject being considered in a separate book. The volumes noted above are ably edited and present much valuable matter compiled from authoritative sources.

THE TECHNIQS OF NEPHROPEXY AS AN OPERATION PER SE, AND AS MODIFIED BY COMBINATION WITH LUMBAR APPENDICECTOMY AND LUMBAR EXPLORATION OF THE BILE PASSAGE. By GEORGE M. EDEBOHLS, M. D., of New York, Surgeon to St. Francis' Hospital; Professor of the Diseases of Women at the New York Post-Graduate Medical School and Hospital. J. B. Lippincott Company, Philadelphia.

This article, in which is reviewed the surgery of the subject, as well as imparted the author's rich experience, appeared as an original article in the *Annals of Surgery* for February, 1902. The author has done 261 nephropexies, and fifty-six times tried to remove the appendix through the same incision, failing four times. His incision is made parallel to the outer border of the erector spinæ; the fatty capsule is in great removed; there are no parenchymatous sutures; the fibrous capsule is used in anchoring the organ; there are no packs or drains. All the details of the operation and after-treatment receive full consideration.

The various arguments for and against the steps which the author uses are fully considered; thus the article, while not containing a great deal which is really new, in being so critical, is certainly of value to one who has this sort of work to perform.

LES MALADIES SEBORRHEIQUES. By R. SABOURAND. Paris: Massau & Cie, 120, Roue St. Germain. 1901.

The works and views of Sabourand are generally known. His published work has been almost entirely upon the subjects of ringworm, seborrhea, acne and alopecia; with the exception of the first named condition, this volume is almost a compilation of his former essays or articles upon these subjects.

Sabourand's views upon ringworm have been confirmed by various authorities, and his efforts in isolating and describing the different varieties of these fungi stand as a monument to his patience and skill. But as yet the world has not so readily grasped and verified his views upon seborrhea, acne and alopecia. No one as yet has succeeded in so universally finding what he has found; only a few are wandering along in his footsteps, but all of us are eager and ready to adopt his ideas when more proof is forthcoming. The nucleus of his pathology is a small bacillus, an exceedingly small bacillus, next in size to Pfeiffer's influenza bacillus. About this bacillus is the book, for to it he attributes acne, alopecia, (both seborrhic and alopecia areata), seborrhic eczema and certain forms of seborrhic dermatitis christened with long adjectives by their various discoverers. This bacillus, according to the author, is found in every seborrhic or oily skin, which furnishes it a media for its growth. Seborrhea is most prevalent at the age of puberty, therefore at that time, so we have acne or follicular infection with the "micro-bacillus." But it is unnecessary to detail his well-known opinions. It requires quite a great deal of faith to accept Sabourand's pathology upon his findings (which no one questions) from the nature of the proof which he brings forward. Here he is vulnerable to criticism in giving such great pathologic importance to an organism so universally found upon the head and face.

If we are not mistaken, several years ago he placed more importance upon this bacillus in causing seborrhic eczema and forms of pityriasis of the scalp than he does at present, criticising Unna and two of the latter's pupils for being too superficial in their work. Then he advocated that the scales did not contain the true pathologic agent, but that it was to be found in the follicle. To-day he gives to the organisms found in the scales the credit of causing pityriasis and mild inflammatory processes, these organisms, the staphylococcus albus and the bottle bacillus being the ones he before discarded. Will he again have to call other organisms to assist in certain of the pathologic processes, which he now attributes solely to the energies of the micro-bacillus.

As Sabourand says, the micro-bacillus paves the way, as it were, and is followed in a jackal-like fashion by various other organisms, giving to acne, for instance, its multififormity. He draws these conclusions from the fact that he finds his bacillus in all such lesions. Unfortunately Schamberg finds bacilli identical with Sabourand's in the normal skin, whether it be oily or dry. However, that fact does not disprove the claims of the author, but it does unfortunately set the skeptical head to bobbing. And when it comes to a question of bacteriology of diseases of the skin, the heads of the skeptical may wag quite exasperatingly. For look at the staphylococcus with its various nine hundred and ninety-nine varieties (Unna) which will bob up serenely as the micrococcus, special impetigo-cocci, *et al.*; and the streptococcus with its chains twisted into knots of contortion. But we must respect these cocci which put their feet into so many unwelcome places, even living upon the normal skin, so we must respect in a like manner the micro-bacillus. For was it not Sabourand who wisely said, some years ago, that the key to derma-pathology was the proper understanding of the role of the strepto- and staphylococci.

DIE KRANKHEITEN DES OHRES. Designed for the general practitioner. By DR. ARTHUR HARTMANN. Seventh enlarged edition. H. Kornfeld, Berlin. 1902. G. E. Stechert, New York, Agent. \$1.90.

This work has become too well known to the medical world to require words of recommendation. Since the appearance of the first edition it has been recognized by teachers as well as practitioners as almost an ideal work. Previous editions have been translated into the English, French, Italian and Russian languages. Each edition has been revised up-to-date. In order to keep abreast with the marked advancement in otology since the last edition appeared, the author has made numerous alterations and has added new methods of treatment. Among the latter worthy of mention are Liebermann's phosphor—treatment of middle ear sclerosis and the author's treatment of tinnitus with adrenaline.

Three new chapters and five illustrations were also added.

DIE SCHOENHEIT DES WEIBLICHEN KOERPERS. Von DR. C. H. STRATZ. Mit 180 theils farbigen Abbildungen im Text, 5 Tafeln in Heliogravure und 1 Tafel in Farbendruck. 12. Auflage. Stuttgart: Verlag von Ferdinand Enke. 1902. Preis: Mk. 12.

DIE RASSENSCHOENHEIT DES WEIBES. Von DR. C. H. STRATZ. Mit 233 in den Text gedruckten Abbildungen und 1 Karte in Farbendruck. Zweite Auflage. Stuttgart: Verlag von Ferdinand Enke. 1902. Preis: Mk. 12.80.

DIE FRAUENKLEIDUNG. Von DR. C. H. STRATZ. Mit 102 zum Theile farbigen Abbildungen. Zweite Auflage. Stuttgart: Verlag von Ferdinand Enke. 1902. Preis: Mk. 7.60.

The author of these three volumes is a gynecologist well-known in Europe. His profession, a residence of several years in Java, as a practitioner of medicine, and his extensive travels almost over the entire world, afforded him abundant opportunity for studying the female body.

I.—In the first mentioned volume the author presents his ideas on "the beauty of the female body." By means of five heliogravures and one hundred and eighty half-tones made from photographs, he explains in detail what must be considered faultless beauty for each part of the body. This presentation of the subject is not alone the view of the artist and the esthetic criticist, but also that of the anatomist and physician giving us the philosophy of perfection of the female body, and everywhere showing how certain diseases, abnormalities in the development and unhygienic conditions cause disfigurement, and demonstrating how beauty and symmetry can be preserved. This fully justifies the author in dedicating this book to "mothers, physicians and artists." Mothers will find much good advice as to how to influence a normal development in their children, and to raise beautifully formed daughters.

II.—The ideal of beauty is subjected to manifold variations. A Zulu woman who well conforms with the ideal of beauty of a Zulu negro must not necessarily be pleasing to our eyes. Stratz in this volume puts himself to the difficult task of criticising the women of all races of the world according to the laws of beauty, laid down in general. And he solves this task in an admirable way. Two hundred and thirty-three photographs elucidate the interesting and judicious explanations of the writer. The bodies of "beauties" representing almost all races of the world are subjected to artistic criticism, and, we may say, many of them pass this examination with honor.

III.—It is self-evident that a man of such an immense experience as regards the female body could not refrain from a study of the clothing of the female. To this subject the third book is devoted. Corsets, tight clothing, shoes, high

heels, garters, etc., are dealt with as regards their effect upon the human body, and sharp criticisms are not withheld where extravagancies of mode produce detriment to the normal forms of the body.

These three books are written in an exceedingly pleasing and engaging style and lavishly illustrated with half-tones and heliogravures, which represent the highest standard of German printing art. The success of these books in Europe was unrivaled, the first mentioned volume seeing twelve editions within three years. They were accepted with real enthusiasm by physicians, artists and all those who have interest in esthetics. We cannot doubt that they will meet with the same success among educated Americans who enjoy reading German.

A MANUAL OF CLINICAL DIAGNOSIS BY MEANS OF MICROSCOPICAL AND CHEMICAL METHODS. By CHARLES E. SIMON, M. D. Fourth edition, thoroughly revised. Illustrated with 139 engravings and 19 plates in colors. Lea Brothers & Co., Philadelphia and New York. 1902.

In the author's preface to the first edition of this work, he greatly lamented the lack of interest manifested by physicians in the subject with which the volume deals—clinical chemistry and microscopy; in the preface to this the fourth edition he expresses his gratification at the great rapidity with which the subject has become widely appreciated. There is no doubt but that the work in hand has done much to increase the interest in this country in laboratory methods of diagnosis. It is indeed surprising that the great importance of such methods has been overlooked by many. There can be no excuse, however, for further neglect. Methods have been simplified and classified so completely that not even a profound knowledge of chemistry is necessary to their employment. Time and inclination are the chief requisites. As to the former, the author properly suggests that a physician who is overwhelmed with work to such an extent that he cannot find time to make use of these aids in diagnosis, is in a position to employ a laboratory assistant. This work deals exhaustively with the blood, the secretions of the mouth, the gastric contents, feces, sputum, nasal secretions, the urine, transudates and exudates, etc. The chapters on the blood and urine are especially complete. In this edition literature references have been added which facilitate a more extended study of the subject in hand.

SHORT TALKS WITH YOUNG MOTHERS ON THE MANAGEMENT OF INFANTS AND YOUNG CHILDREN. By CHARLES GILMORE KERLEY, M. D. G. P. Putnam's Sons, New York, London. 1901.

In his preface the author states that the aim of this little volume is to help the young mother to a closer acquaintance with and a more intelligent appreciation of the nature and demands of the little life entrusted to her care. He claims that he intentionally avoids any suggestions relating to medical treatment, most probably because he realizes what mischief is often done by the indiscriminate use of "house remedies" and "medical advice" given in so many little books written for the benefit of the "young mothers." We gladly acknowledge that the author fulfills the first part of his aim in a very satisfactory way. Paragraphs like those on maternal nursing, habits, children parties, etc., offer both interesting and instructive reading. We feel, however, that the author transgresses the limits, set himself, if he—*e. g.*, speaking of convulsions—says (page 20): "No solid food or milk should be given for twenty-four hours" or "during the next few days there should be no excitement," etc. Is the author not afraid that the young mother will be induced by such advice to try to get along "during the next few days" without a doctor? And again, what real benefit shall the young mother obtain by being told by the author that there are four types of

grippe, and that he saw twenty cases of the third type during the winter of 1890-91? This book is in its present form recommendable, but we think it could, in its second edition, be considerably improved, if a part of the medical science taught in it would be eliminated.

THE NEUROSES OF THE GENITO-URINARY SYSTEM IN THE MALE, WITH STERILITY AND IMPOTENCE. By DR. R. ULTMANN, Professor of Genito-Urinary Diseases in the University of Vienna. Second edition. Revised, with notes and a supplementary article on Nervous Impotence, by the translator, GARDNER W. ALLEN, M. D., Surgeon in the Genito-Urinary Department of the Boston Dispensary; Instructor in Genito-Urinary Surgery in Tuft's Medical College. Illustrated. Pages 198. 12mo. Price, extra cloth, \$1.00, net, delivered. Philadelphia: F. A. Davis Company, Publishers, 1914-16 Cherry street.

It is unfortunate that the text of this book could not have been revised by the author, as there is much material in it of great value and much so antiquated that it is of little value, except as a matter of history. The notes of the translator somewhat make up for this deficiency, but it is a little of an imposition to have to wade through matter that is all put aside almost with one stroke of the pen by the translator. This is especially noticeable in what the author and translator have to say about catheterization in distended bladders.

However, while some of the material may be rather old and out of date, the book will well repay one for reading, at least for sound pathological teaching and a knowledge of treatment now largely superseded, together with that of the most recent date.

DIE KRANKHEITEN DER VERDAUUNGSORGANE IM KINDESALTER. Fuer Aerzte und Studierende. By E. SCHREIBER. Wurzburg: A. Stuber's Verlag. 1902. Pages 286. G. E. Stechert, New York, Agent.

This book gives in concise form a compendium of present knowledge in the important field of diseases of the gastro-intestinal tract in children. Particular attention is paid to the discussion of the underlying pathology and morbid anatomy of the different diseases, a feature at once interesting and valuable.

To the American, German methods of therapy seem at times rather strange. Thus the methods of treatment of the acute gastro-enteric disorders recommended by Schreiber are rather different from our methods. Aside from this, however, the book is really valuable for the clearness and the fairness of its views. In the discussion of appendicitis, for instance, the medicinal treatment is advocated for many cases, and the rules for surgical interference are formulated fairly, wisely and judiciously. The author's style is clear and incisive and the general arrangement of the subjects treated excellent.

AN EXPERIMENTAL AND CLINICAL RESEARCH INTO CERTAIN PROBLEMS RELATING TO SURGICAL OPERATIONS. An essay awarded the Alvarenga Prize for 1891 by the College of Physicians of Philadelphia. By GEORGE M. CRILE, A. M., M. D., Ph. D., Professor of Clinical Surgery, Medical Department Western Reserve University; Surgeon to St. Alexis Hospital; Associate Surgeon to Lakeside Hospital, Cleveland. Philadelphia: J. B. Lippincott Company. 1901. Price, \$1.00, net.

Four interesting problems have been studied by the author, and they are: The effect of severing and irritating the vagi, the effect of the intravenous injection of saline solution, the physiological action of cocain and eucain, and the ef-

fect of temporary closure of the carotid arteries. By stimulation of the vagi, as well as section of them, more pronounced respiratory than circulatory symptoms were produced. They are of great interest, but cannot be reproduced here in full. When too much saline was injected into the veins the dogs died from asphyxia, but the blood-pressure and the pulse-rate was less influenced than one might have supposed. The data presented upon this subject are of especial interest, the author showing why it is that extreme shock makes the use of saline ineffectual. After eighty-nine experiments with eucain and cocain upon animals the author gives some interesting conclusions, one of which is of decided interest to the surgeon, since it is of great practical benefit, viz., that these drugs by blocking the vagus nerve prevent the cardiac inhibition which results from its stimulation during surgical operations, a thing which cannot always be avoided. The carotids can be clamped for forty-eight hours without injury if properly done. The knowledge experimentally gained has been applied several times by the author, in that he has removed tumors from the head and face with temporary closure of both vessels.

THE DIAGNOSIS OF SURGICAL DISEASES. By Dr. E. ALBERT, Late Director and Professor of the first Surgical Clinic at the University of Vienna. Authorized translation from the eighth enlarged and revised edition by ROBERT T. FRANK, A. M., M. D. With fifty-three illustrations. New York: D. Appleton & Company. 1902.

To one who has read this work in the original there occurs a feeling of decided satisfaction that American students and practitioners are to be presented with it in such a form that they can read and appreciate it. Albert was a poet, a man of distinctive literary genius, and the most graceful lecturer of his time on surgical subjects. When others talked to empty or half-filled benches the gifted Albert's clinic was crowded; certainly the best proof of the fact that the man was interesting. But this was not all. He was even more famous for the amount of instruction conveyed in his lectures. He used his clinical material first of all for the demonstration of diagnostic methods, and then, having performed his first duty to the student, proceeded to the operation as a matter of secondary import. On the other hand, his contemporary worker, Billroth, the splendid operator, as the students used to say, was wont to spend less time in preliminaries and to say: "Well, we will soon know exactly what it is when the belly is open." Naturally, then, Albert of the two famous surgeons was the one better fitted by nature and habit to write a text-book on the diagnosis of surgical diseases. Indeed, a perusal will bear me out in this conclusion as to contents and literary merit. Of course, the author's exact style cannot be reproduced in a translation, but I think I am safe in saying that the book has lost as little by the procedure as is usual in such cases.

TRAITE DE CHIRURGIE D'URGENCE. Par FELIX LEJARS, Professeur agrege a la Faculte de Medecine de Paris; Chirurgien de l'Hopitaux Tenen; Member de la Societe de Chirurgie. Troisieme edition. Revue et augmentee. 751 figures dont 351 dessinees d'apree Nature par le Dr. E. Daleine et 172 photographies originales. Paris: Masson et Cie., Editeurs, Librairies de l'Academie de Medecine, 120 Boulevard Saint-Germain. 1901.

This large work (1045 pages) occupies a position in French surgical literature which has no exact parallel in our own language. It is devoted to an exhaustive consideration of emergency surgery in all of its minute details, and the demand which it has awakened is best illustrated by the fact that it appears in its third edition within three years.

The first chapter is devoted to general considerations in so far as they relate to emergency surgery. There are duly considered the surgeon's outfit, anesthesia, hemostasis and the use of saline solution. The remainder of the work is divided up among the various regions, with one lengthy chapter upon the different forms of hernia which may become strangulated and thus become the subject of emergency surgery. In line with the most modern surgical advances, the author devotes considerable space to the surgical treatment of wounds of the heart and pericardium. The indications for operative intervention are clearly detailed, but can, to save space, hardly be reproduced here. The choice of methods as well as the most appropriate incisions are all profusely illustrated. The admirable flap as made by Fontan is the one here advised (with its base to the side, that circulation may not be interfered with). Most interesting are the chapters on hemorrhage from the stomach and duodenum. A loss of blood in quantity between one-half and one liter indicates the opening of a large vessel, and the spontaneous closure of the same is hardly to be hoped for; and while it is well to attempt to save the patient by medical means, still in such a case the surgeon must be ready to operate upon a recurrence of the bleeding. Thus are crystallized the salient points in all the various kinds of emergency cases. Indeed, the book is made up of concrete statements calculated to guide the surgeon in just those instances when he finds little that is of value in the general works or when he cannot risk the patient's life, while he delays for hours in rummaging through a library, even if he be so fortunate as to possess one. The general remarks on the laparotomy for intestinal obstruction take the most comprehensive grasp of that subject that has come to the reviewer's notice in French, German or English. One of the points here urged, and one by the way which is generally neglected, is stomach lavage before operation on a patient affected with fecal vomiting. This simple procedure may save the individual from having his respiratory apparatus flooded by the vomitus while under the anesthetic. After the belly is open the operator may follow either one of two plans in case the obstruction does not present itself at once: He may grasp the cecum and work from it along the gut to the point of obstruction, or he may make a very long incision and eviscerate the entire contents. This latter method, while indispensable in some instances and good in all, must always be attended by a pronounced degree of shock. One of the chief emergency considerations in modern surgery is that of appendicitis, and to this subject the author does full justice. He takes the eminently sensible and moderate view that all of these cases must be operated upon, many in the acute attack it is true, but as many as possible during the free interval. Pencil as well as pen have been called into use to make clear the various technical points here involved. The book occupies a place by itself in surgical literature, and this being true, it belongs to the outfit of every well-equipped surgeon.

PROGRESSIVE MEDICINE, Vol. II., JUNE, 1902. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 440 pages, 28 illustrations. Per volume, \$2.50, by express prepaid to any address. Per annum, in four cloth-bound volumes, \$10.00. Lea Brothers & Co., Publishers, Philadelphia and New York.

The June issue of *Progreseive Medicine* contains a series of valuable contributions on subjects of great importance to the general practitioner. Surgery of the abdomen, including hernia, is considered by Wm. B. Coley; Dr. John G. Clark gives the report on progress in gynecology, while Dr. Alfred Stengel's ar-

ticle is devoted to the diseases of the blood and ductless glands and the hemorrhagic and metabolic diseases. The volume is concluded with a contribution of Dr. Edward Jackson on ophthalmology. As usually, illustrations are employed liberally wherever they can aid in the elucidation of the text.

Announcement is made of *REGIONAL MINOR SURGERY*, by GEO. G. VAN SCHAICK, M. D., attending surgeon to the French Hospital and to the St. Vincent de Paul Orphan Asylum, New York. Containing about two hundred pages and profusely illustrated with drawings especially made for this book. It is bound in cloth and white leaf, printed on heavy book paper and devoted to the treatment of the surgical conditions that are met with in the daily practice of every physician. This book is thoroughly practical and presents the subject in an interesting and instructive manner. (Price, \$1.50.) Published by International Journal of Surgery Co., 100 William street, New York.

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ORIGINAL ARTICLES.

THE THERAPY OF CANCER OF THE INTESTINES.

BY PROF. J. HOCHENEGG, of Vienna, Austria.

A review of all the cases of intestinal cancer, including those of the rectum, that I have operated upon, is given in the following table:

TABLE I.

DIVISION OF GUT.	NO. OF CASES.	RADICAL OPERATION.				PALLIATIVE OPERATIONS.					
		No.	Cured.	Died.	Perm't Cure.	Enterostomy	Impr'd.	Died.	Anastomosis.	Impr'd.	Died.
Cecum	9	4	2	2	.....	2	.....	2	4	3	1
Ascending Colon.....	2	.....	.....	.....	.....	2	1	1	.....	.....	.....
Transverse Colon	1	1	1	.....	1 (1894)	.....	.....	.....	.....	.....	.....
Descending Colon.....	1	1	.....	1	.....	.....	.....	.....	.....	.....	.....
Splenic Flexure.....	4	2	2	.....	1 (1897)	2	.....	2	.....	.....	.....
Sigmoid Flexure.....	28	12	7	5	1 6 years	16	5	11	.....	.....	.....
Rectum.....	237	174	158	16	29	60	46	14	3 exocoelations.	3	.....
Per Cent.....	282	194	170	24	32	82	52	30	7	6	1
		68.7	87.6	12.3	16.2	31.3	72				

My experience in cancer of the intestines includes two hundred and eighty-two cases, which were found distributed over various portions of the large intestine. I will take up here in detail only those cases of each division of the intestinal tract which were of special interest, either because of the physiological findings, the therapeutics applied, or the ultimate results.

Among the tumors of the cecum, one case, treated and cured by resection, is worthy of special mention. In this case an examination, made nine months after the operation, revealed no local recurrence, but an inoperable carcinoma of the rectum at the level of the third sphincter. I believe that in this case particles of the soft primary tumor, having been carried down into the rectum, had directly infected this part of the gut.

Eight years ago I operated on the transverse colon of a man who shows no recurrence to date. Notwithstanding his age of eighty-four, he feels entirely well, mentally and physically. The case is worth mentioning on account of this ideal permanent cure and the *modus operandi*, first employed in this case and since in many others.

June 6, 1894, I was called to see the patient, seventy-six years of age at that time, who was suffering for three days with rapidly progressive symptoms of occlusion of the intestine. The patient was in an extremely weakened condition, and presented such a marked generalized meteorism that I could not arrive at a definite diagnosis. There had been constipation at times, but never distinct attacks of colic.

At the operation, performed the same day, the cause of the obstruction was found to be a circular carcinoma of hard consistence, and about the width of three fingers, situated in the middle of the transverse colon, which was pressed upward under the left costal arch by the much distended colon. Considering the age of the patient and his weakness on the one hand, and the great distension of the colon and narrowness of the distal portion on the other, I thought the following procedure the most practical: The tumor was fixed in the abdominal wound by means of a strip of iodoform gauze, pulled through an opening cut in the mesentery. The abdominal wall was closed above and below the tumor as far as possible. The afternoon of the same day I opened the gut a short distance above the tumor, tied into the opening a glass tube, and in this way made it possible to slowly empty the bowel without risk of soiling the wound. Within ten days the condition of the patient had so far improved and the bowels were sufficiently emptied to enable me to perform a second operation. The operation consisted of circumcision of the artificial anus, resection of the diseased part of the gut, end-to-end anastomosis, and complete closure of the abdomen. The patient has, as remarked above, remained well ever since.

I reported this case before the German Surgical Congress in 1898. I take the liberty, however, to mention it again, because the same method of operation was successfully carried out in five other cases (two cases of carcinoma of the splenic flexure, three cases of cancer of the sigmoid). In one of them there has been no recurrence since 1897.

The advantages of the procedure are clear. First of all, the danger of infection of the peritoneum through fecal matter is avoided, as the bowel is only opened after complete walling off of the peritoneal cavity. Furthermore, the primary operation, consisting in opening the peritoneum and elevating and fixing the liberated carcinoma, is practically free from danger. The more difficult secondary operation is done after the bowels have been emptied and the patient has regained some strength. I have observed in all my cases that at the time of the second operation the proximal and distal portions of the bowels have been about the same size, rendering end-to-end anastomosis less difficult.

Of the cases of cancer of the sigmoid flexure, three are worthy of interest. In one the patient remained cured six years after resection, dying of a non-carcinomatous disease of the kidneys. In a second case the anatomical conditions which led to the formation of the carcinoma were remarkable. The patient, seventy years old, was operated on for a suspected carcinoma of the flexura sigmoidea. Laparotomy was performed and a carcinoma was found in the middle of the flexure, involving two-thirds of the periphery of the intestinal wall. However, the entire flexure as far as it could be brought into view, showed numerous small *diverticula*, some about the size of a cherry, all filled with hard fecal material, feeling to the touch like wax. Evidently the cancer had developed from such a diverticulum. By means of the described operation, performed in two *seances*, a complete and permanent cure was achieved.

In my opinion this carcinoma developed on the base of a chronic ulcer, produced by the irritation of fecal matter retained in one of these diverticula. The patient had been a hearty eater, suffering for years from constipation. I refer to this fact because constipation is mentioned by several authorities as a cause of the formation of diverticula.

A third case of cancer of the sigmoid shows how, even in such a case, damage may result from the forcible introduction of a rectal tube.

Immediately after a high irrigation with a long semi-flexible rectal tube, a swelling accompanied by high fever and severe pain appeared above Poupart's ligament on the left side. The patient was formerly treated symptomatically with irrigation and purgation, because the carcinoma was considered to be inoperable. This occurrence, however, necessitated my being called in. I found a man sixty-two years old, very feeble, weakened by chronic constipation, fever and pain. A hard infiltration, the size of a fist, fluctuating centrally, could be felt in the abdominal wall above Poupart's ligament, contiguous to a harder intra-abdominal tumor, apparently connected with the sigmoid flexure.

I made an incision around the infiltrated area without opening the abscess, opened the peritoneum, and liberated the tumor in its connection with the infiltration. After proximal and distal ligation of the bowel I resected the tumor, and sewed both ends of the gut into the abdominal wound. Patient recovered and feels well with this artificial anus. Careful observance regarding evacuation of the bowels permits him to go about his duties—*e. g.*, to preside at meetings lasting for hours. The specimen showed that the sigmoid cancer was perforated by the high introduction of the tube.

I will now speak of my results in the treatment of cancer of the rectum.

It would be needless to repeat here the reasons why I operate without exception by the sacral route. I gave them two years ago at the German Surgical Congress. My method of operation remains unchanged; therefore I shall confine myself to a brief consideration of a number of opposing opinions expressed since my last report.

In my paper before the Surgical Congress in 1900 I merely desired to demonstrate what could be done for our patients suffering from rectal cancer, how many survive the radical operation, how many are thereby permanently cured.

I reduced the mortality of radical operation to 8.6 per cent., so far never attained by any other operator. I wish to emphasize that the explanation given by some, that my low mortality is due to a careful selection of the material, cannot be accepted. In preceding papers on the treatment of rectal cancer I have refrained from giving the statistics of all my cases, because these papers were written solely with the idea of advocating the sacral method. I shall give here a complete account.

Since 1887 two hundred and thirty-seven cases of rectal cancer were under my care, one hundred and seventy-four of which were treated by radical, sixty-three by palliative methods.

Some authors place great significance on the proportion between radically and conservatively treated cases, as demonstrating the greater or less inclination of the operator to radical operation. My figures show that I treated seventy-two per cent. of the cases radically, and Table II demonstrates that I stand sixth among the surgeons as to the frequency of application of the radical operation.

TABLE II.

OPERATORS.	Date.	Total Number of Cases.	Radical Operation.	Percentage of Radical Operation.	Mortality, Per Cent.
1 Bergmann.....	1888-1900	155	125	80.6	32.0
2 Koenig.....	1878-1890	120	96	80.0	32.5
3 Schede.....	1895-1901	61	48	78.7	32.0
4 Kuester.....	1885-1898	126	95	75.4	25.2
5 Kraske.....	1885-1896	110	80	72.7	18.7
6 Hochenegg.....	1887-1902	237	174	72.1	9.19
7 Czerny.....	1878-1891	152	109	71.6	11.0
8 Albert.....	1887-1900	158	105	66.4	13.0
9 Eiselsberg.....	1896-1901	75	45	66.1	11.1
10 Mikulicz.....	1890-1897	109	66	60.6	25.7
11 Kroenlein.....	1881-1899	110	63	57.2	11.1
12 Gussenbauer.....	1882-1896	259	145	56.0	22.7
13 Madelung and Garre..	1883-1899	115	53	46.0	19.0

Although I do not accept the propriety of conclusions drawn from the percentage of the radically treated cases as to the care of the operator in selecting his cases for operation, it is fair to state that even from such a consideration I could hardly be considered belonging to the class of the too careful operators, since in my cases the radically operated ones triple the number of those treated palliatively. The fact that from 1887 to date I had one hundred and sixty-six cases, which is by far the largest number that any surgeon has had the opportunity of operating on by the sacral route, would also contradict the assumption that I select my cases too carefully.

Other writers claim that my low mortality may be explained by a change of the indication during operation. They assume that whenever conditions become critical during operation, I carry out the operation only in part; whereas other operators, having decided upon radical operation, carry it through so long as no absolutely unsurmountable obstacle occurs.

Some of my specimens will easily prove that I do not quail before long-drawn-out operations nor beat an early retreat.

I fully agree with Kroenlein as regards his opinion of the great importance of an exact understanding of the reasons for these considerable differences in the results of operation, and I will try to throw some light on these reasons.

Kroenlein gave in his well-known essay, in two tables, the statistics of the immediate results of operation and the causes of death following operation. Copying Kroenlein's subdivisions, I present on next page a table which is brought up to date by including the latest publications.

These tables show that, according to the latest statistics, the mortality percentage differs between 9.19 and 32.5 per cent.

In all my cases I have lost not one through anesthesia, hemorrhage during or after operation, shock or collapse, nor from pneumonia following anesthesia, and only two cases from acute sepsis resulting from the operation. These causes of death, however, reach a very high degree with some operators, amounting sometimes to fifty per cent. of all fatal cases.

TABLE III.—RADICAL EXTIRPATION OF RECTAL CANCERS.

OPERATORS.	Date.	No. of Operations.	Died.	Percent- age of Deaths.	Sepsis and Pye-mia.	Peri-tonitis	Col-lapse.	Lung Affec-tion.	Other Caus-es of Death
<i>Mortality Below Twenty Per Cent.</i>									
1 Hochenegg.....	1887-1902	174	16	9.19	7	1	1	1	6
2 Czerny	1878-1891	109	11	10.0	..	8	1	2	..
3 Kroenlein.....	1881-1899	63	7	11.1	1	2	1	1	2
4 Eiselsberg.....	1896-1901	45	5	11.11	1	2	1	..	1
5 Albert.....	1887-1901	153	17	13.0	11	1	1	2	2
6 Kraske.	1885-1896	80	15	18.7	3	4	3	2	3
7 Madelung & Garre.	1883-1890	53	10	19.0	4	1	2	2	1

Mortality Above Twenty Per Cent.

8 Gussenbauer	1882-1896	145	33	22.7	11	9	7	2	4
9 Kuester.	1885-1898	95	24	25.2	6	6	7	4	1
10 Mikulicz.....	1890-1897	66	17	25.7	1	2	2	4	8
11 Kocher.....	1873-1889	35	10	28.5	5	3	1	..	1
12 Schede.....	1895-1901	53	17	32.0	..	2	9	2	4
13 Bergmann.....	1888-1900	125	40	32.0	7	2	21	3	7
14 Koenig.....	1878-1890	96	31	32.5	10	1	6	..	3

I think here is the key to the correct understanding of the divergence in results, and it should at last be acknowledged that in the method of operation, and not in the selection of the cases, may be found the cause for my smaller mortality. A further reason for the divergence of the immediate results can be found in the difference in the healing process. In my opinion, it is in my cases enhanced in various ways. I consider Kraske's preparatory operation as very favorable for the healing process, because it offers, more than any other, the opportunity for a direct, free drainage backward; because it is free from the dangers incident to all the preparatory operations with temporary resection of the gut, or to the methods which from below approach the higher parts of the pelvis. Especially these latter methods do not permit of a satisfactory drainage of the deep field of operation.

That the wound must be protected from contact with bowel contents is generally acknowledged. The methods of suturing proposed by me seem to fulfill this purpose, at least for the first few days, and these are the most important. I admit, however, that sometimes even in this method stitches tear, and then bowel contents soil the wound. But if granulation has once begun, this occurrence is usually without consequence.

I have emphasized on a previous occasion, and repeat here, that the preparation of patients for operation by the simple administration of cathartics which only liquefy the intestinal contents is not sufficient.

Of considerable importance is an extremely careful after-treatment. And, in conclusion, I can only say that the great divergence in the immediate results of operation is solely explainable by the method of operation, by the care of the wound, and by the after-treatment.

The next question which arises, naturally, is whether my method is sufficient, whether the late results properly compare with the results of those operators "whose mortality figures," as Wolf says, "are appalling, whose lasting cures are splendid."

As the criterion for a permanent cure I accept Kroenlein's triennium. I consider cases permanently cured in which, by a detailed written report of the patient, by an examination made by a physician, or, as in most of my cases, by repeated personal examination, the fact is proven that from the time of the operation at least three years have elapsed and the patient is still free from recurrence. Of these cases those must be deducted which show late recurrence.

I found, for instance, this year again late recurrence in three of my cases, which, in accord with the usual calculations, had been considered permanently cured.

Of my one hundred and seventy-four radically operated patients, the eight operated by the perineal route and one hundred and twelve of those operated by the sacral route have passed the triennium. I base my calculation, with reference to permanent cure, on these one hundred and twenty cases. Thirty-five of them lived more than three years free from recurrence, three of them died of late recurrence, so that I can to-day figure thirty cases as cured—i. e., twenty-five per cent.

I do not approve of the way of Kroenlein's figuring the percentage of permanent cures. He includes in his calculations all the cases operated upon radically, also those which have not yet passed through a period of three years. Yet I will accept here this method, in order to compare my results with those of other surgeons.

In the following table I give the percentage of permanent cures, calculated from the number of radical operations.

TABLE IV.—EXTIRPATION OF CANCER OF THE RECTUM.

Permanent Cures.

Mortality Percentage.	OPERATORS.	Total Number of Cases.	PERMANENT CURES.		Late Recurrence.
			Number.	Per Cent.	
28.5	Kocher	35	10	28.5	3
9.19	Hochenegg	174	30	17.3	5
25.2	Kuester	95	16	16.8	2
11.1	Kroenlein	63	10	16.0	..
10.0	Czerny	109	16	14.6	..
18.7	Kraske	80	11	13.7	3
32.0	Bergmann	125	16	12.8	..
19.0	Madelung and Garre	53	6	11.3	2
32.0	Schede	53	6	11.3	..
13.0	Albert	153	16	10.4	3
25.7	Mikulicz	66	6	9.0	2
11.1	Eiselsberg	45	4	8.8	2

That some of the operators fare badly in this form of calculation is best shown in the case of Eiselsberg, whose permanent cures have rightly been

figured as twenty per cent. by Prutz. In these statistics he takes last place, because twenty-five cases are included which had not yet passed the triennium.

Out of my thirty permanently cured patients ten have a completely, two a relatively continent anus; fourteen have an anus sacralis; three have the anus in the normal position, but it is incontinent. These three last mentioned cases, however, have adapted themselves to the defect, and know through diet and care how to regulate the stool so that they are able to follow their vocations without difficulty.

The time elapsing since operation in my permanent cures is as follows:

In one case more than fifteen years;

In one case more than eleven years;

In two cases more than ten years;

In three cases more than nine years;

In four cases more than six years;

In five cases more than five years;

In four cases more than four years;

In all the remaining cases more than three years.

Five succumbed to intercurrent diseases.

As Table IV shows, I stand second in regard to percentage of permanent cure, being excelled only by Kocher's clinic.

I feel that I must lay special stress on this fact, since it proves that I am not behind other operators in point of radicalism, and that the cause for my lower mortality can certainly not be found in any avoidance of too radical procedures on my part.

ANGIOMA OF THE LIVER—REMOVAL—WOUND TREATED BY THE INTRA-PERITONEAL METHOD.*

BY C. M. NICHOLSON, M. D., of St. Louis,

Professor of Anatomy and Clinical Surgery, Marion-Sims-Beaumont College of Medicine.

Angioma may be defined as a tumor composed of blood vessels produced from a matrix of cells of the vascular layer of the embryo, taking part in the development of the blood vessels. This definition excludes from this class of tumors all swellings caused by dilatation of pre-existing blood vessels.

Under the head angioma, Virchow included all vascular tumors. Ziegler sanctions the opinion that cavernous spaces are formed by dilatation of pre-existing capillary vessels, accompanied by pressure atrophy. Senn considers this view untenable, as the structure of the tumor does not represent the conditions produced by vascular obstruction. Weil, from his observations, concludes that the origin of new blood vessels is as variable as the formation of new embryonal vessels. He found projecting from the wall of the old and new capillary blood vessels a streak of protoplasm which showed nucleated projections, which, in the course of time, became laminated and were traversed by blood from the pre-existing vessels. In other places he found proliferation of the endothelial cells which formed buds and projected into surrounding tissues. These masses of endothelial cells formed new vessels by the formation of hollow spaces which communicate with the vessels from which they originated.

* Read before the Missouri State Medical Association, May, 1902.

Rokitansky has seen and described the formation in the connective tissue of blood spaces discontinuous with pre-existing blood vessels and which only later entered into communication with them.

The angioma is composed of three parts: First, new blood vessels which are in communication with the adjacent vessels; second, interstitial tissue composed of pre-existing tissues in which the tumor develops, and third, the blood contained in the vascular spaces. In the growth of the normal blood vessels the angioblasts furnish the essential tissue elements of the blood vessels. The blood vessels reach their requisite normal size when the process becomes stationary. The angioblasts from which an angioma develops observe no such limitation of function. Their function is a progressive one and their product of tissue proliferation results in the formation of atypical blood vessels which are not required by the part in which they are produced and which constitute the essential tumor tissue.

The vascular spaces are lined with endothelial cells, the product of the angioblast. In growing angioma new blood spaces continue to form and again enter into communication with older vascular spaces. As the blood spaces are formed by the production of an intima from the angioblast, active proliferation takes place in the remaining tissue of the vessel wall. Connective tissue and muscle fibers, derived from pre-existing blood vessels, are produced, forming the outer and middle coats of the new vessels. The limits of the tumor, as in all benign growths, are well defined; the communication with blood vessels is very free. Virchow and Maier have shown that angioma of the liver can be injected from the hepatic artery and vein and from the portal vein. According to the number and activity of the angioblasts the tumor may grow, remain stationary, or disappear spontaneously.

The cavernous angioma may be either congenital or acquired, is found in the liver, spleen, kidney and bone, and composed of irregular blood spaces, which communicate freely with one another and are separated by fibrous septa of variable thickness; the walls of the blood space are lined by endothelium. The formation of the new blood spaces takes place in the fibrous septa and in the periphery of the tumor.

Great progress has been made in the surgery of the liver during the past fifteen years, due largely to the results of experiments on animals of Gluck, Ponfick and Meister; and the mortality has been reduced from sixty-two to less than ten per cent. The patient whom I present, Mr. P. H. P., is a Dane, age thirty-nine, single, plasterer. He entered Rebekah Hospital July 22, 1901. His past history and that of his parents, who are living, reveal no antecedents which bear on the present trouble. As a boy he was delicate, but for twenty years prior to 1896 he enjoyed good health. During the spring of that year he experienced a feeling of fullness at the pit of the stomach. Some months later pain in the epigastric region became a prominent symptom. The pain recurred at intervals of two or three weeks, and was accompanied by nausea, and occasionally by vomiting. He had refrained from eating for twenty-four hours or more at a time to obtain relief. Had been unable to attend to his work for five months past, during which time he had lost twenty pounds in weight. His bowels were regular, urine straw-colored, specific gravity 1020, no albumen, no sugar, slight sediment.

On examination a tumor was felt in the median line, a little nearer the ensi-

form cartilage than the umbilicus. The growth pushed the abdominal wall forward. It could be moved in all directions, was tender on pressure, dull on percussion, was separated by a tympanitic zone from the liver, and would move slightly with respiration. Inflation of the stomach did not alter the position of the tumor. The lower border of the left lobe could be felt below the growth, so that the probability of attachment to the stomach, colon, pancreas or omentum was excluded.

July 25th an incision was made over the most prominent part of the growth, a little to the right of the median line, extending from just below the ensiform cartilage to a point an inch above the umbilicus. A rounded tumor, measuring three and a half inches transversely presented. Examination with the index finger showed it was pedunculated, elevated above the liver more than two inches; that it occupied the anterior surface, and did not extend to the lower border of the left lobe. By pressure its size could be slightly reduced. Believing it to be an angioma, I cut down through the liver tissue into its substance, intending to put an elastic ligature around its base. The hemorrhage was alarming. To control the bleeding I surrounded the left lobe an inch to the right of the incision into its substance with a small rubber tube, and, with scissors curved on the flat, I divided where I had intended applying the ligature. Five cavernous spaces were to be seen. These were closed by chromasized gut ligatures, passed through the liver substance some distance from the sinuses. The surface was then packed with sterilized gauze, and the rubber tube loosened. The cautery was not used, as the gauze packing effectually controlled the bleeding.

The method of dealing with the wound next presented itself. Knowing that Langenbach, Wagner, Lius and Keene had closed the abdomen after controlling the bleeding, and Lius' and Wagner's cases died of hemorrhage, and that Langenbach's case was only saved by reopening the abdomen and tying the vessels, I decided to fix the stump into the abdominal wound. This was tried, but the tension was so great the stitches were removed. The upper and lower angles of the abdominal incision were then closed. The surface of the liver wound was packed with gauze, which extended through the parietal incision. The abdominal cavity remaining open, forty-eight hours later I removed the gauze (which was stained by bile), intending to close the peritoneal opening, but some oozing appeared. The following day a second effort was made, with similar result. On the fourth day the packing was removed, the edges of the abdominal opening freshened, and the wound closed. The patient made an uneventful recovery. At no time was the temperature above $101\frac{1}{2}^{\circ}$. He left the hospital August 11th, sixteen days after the operation, apparently well.

Being anxious to know the exact nature of the growth, the specimen was sent to Dr. Henry Rohlfs, pathologist, of this city. The following is his report:

"The microscopical finding in the specimen labeled 'Patterson,' submitted July, 1901, for examination, I have to report as follows: The general appearance of the specimen contained quite a fibrous stroma, in which were suspended fusiform blood vessels, tubular and sacculated variously throughout; also cavernous variety, with hyaline degenerations of underlying tissue, considerable parenchymatous hemorrhage; normal liver structure entirely absent."

Reviewing the literature of the subject, I find the total number of operations

for hepatic tumor thus far reported seventy-six, though but four of that number were for angioma.

At this time, almost ten months after operation, the patient has had no recurrence of the attacks of pain, nausea or vomiting, has gained fifteen pounds in weight, and is in the daily pursuit of his calling.

2900 Washington avenue.

MOVABLE KIDNEY.

BY T. C. WITHERSPOON, M. D., of St. Louis.

In presenting a paper on this most interesting subject, my object is to call attention to a class of patients who necessarily enter into the practice of every busy practitioner, and who have this condition overlooked because of either improper methods of examination or disinclination on the part of the doctor to spend the time in careful physical exploration of the abdominal region. I am very certain many of the dyspeptics (thin, nervous and neurasthenic) with stomach, bowel, liver symptoms could have the seat of their trouble traced to a kidney which because of abnormal mobility, pressing upon neighboring organs or pulling upon its pedicle, causes a chain of disturbances which are incorrigibly difficult to handle, and which carry the sufferers from physician to physician in search of health.

It is well before starting upon a discussion of the subject to understand the significance of the term movable kidney. I find in looking over the literature of the subject a tendency to confuse the terms movable and floating as applied to the kidney. By movable kidney should be understood that condition of the organ in which an abnormal amount of movement is allowed it by its perirenal fascia, and this movement must be wholly behind the peritoneum and bowel. A floating kidney, on the other hand, is a congenital malformation in which the organ has a mesonephron upon which it swings in the abdominal cavity.

Movable kidney is acquired, while the floating kidney is normal to the possessor having been brought about in fetal development. All kidneys are movable to a certain degree in that they are not fixed, but partake of the movement of the diaphragm in respiration. Between extreme inspiration and expiration this movement is given by Albarrans as three to five cms. F. S. Wilson as the result of experiment upon twelve cadavers, using the fingers upon the organ through an anterior incision, gives one-half to one and one-half inches as the normal amount of movement allowed. It will be seen there is no fixed law as to the amount of movement which the kidney possesses, and necessarily there can be no set rule of linear measure by which a kidney should be adjudged movable.

That which would result in symptomatic and pathologic changes in one would produce no recognizable symptoms in another. For practical purposes a movable kidney is one whose excursions produce traction upon the duodenum, colon, appendix, disturbing alimentary functions or by changes in the direction of its pedicle causes a series of both urinary and general symptoms which are out of harmony with the normal individual. I find a number of writers who record cases of movable kidney which cause neither discomfort nor do they pro-

duce pathologic changes which can be detected. I am sure this lacks practicality. The direction taken by a moving kidney may be downward and either inward or outward. This direction is determined by the combined influence of the perirenal fascia and the surrounding viscera. The relationship of the perirenal fascia, which is a derivative of the subperitoneal connective tissue, has been carefully worked out by Gerota ('95) and by Glantenay and Gosset ('98). There are two layers of this fascia, the one behind and the other in front of the kidney. That behind is continuous with the psoas fascia and with it attached to the vertebral column. The anterior layer crosses to the opposite side, where it passes in front of that kidney. Above, these layers unite and are attached to the diaphragm; below they continue separate, being united by crossing fibers which help to support the kidney. It is seen that this arrangement allows of a greater or less movement of the enclosed kidney, and, too, it is readily seen how developmental defects of an hereditary kind could predispose to abnormally great movement. The perirenal fat upon which some writers lay so great stress is enclosed by these two layers of fascia.

Wolkow and Delitzin (1900) wrote upon the influence of the prevertebral space in allowing kidney misplacement. Plaster casts were taken of a number of fossæ in the cadaver, and it was found these spaces were shallower and more open below in women than in men, and it was also determined that the right fossa was so in excess of the left in the same individual. This would account for the preponderance of right movable kidneys in the female.

The usual direct causes given for this condition are: Frequent child bearing (Glennard), wasting of the fatty capsule which is supposed to help hold the organ in place (Landau), hepatic, chest and other troubles producing pressure from above, hernia and uterine displacements which cause colon traction downward, stones and growths of the organ increasing its weight, and, last of all, trauma.

An interesting paper appeared in 1900 by Godart and Dauhieux, in which they deny the influence of pregnancy and age in the causation of movable kidney, and likewise look upon its association with enteroptosis as merely coincidental. They insist that intra-abdominal tension changes have nothing to do with movable kidney.

The symptoms of movable kidney are very variable and depend of course upon the disturbance in the pedicle in the one case and upon pressure or traction on neighboring organs in another. In a general way they may be grouped under the following heads: First, urinary and local; second, alimentary; third, general.

Pain in the kidney or in the side, radiating into the bladder, testicle, along the branches of the lumbar or sciatic nerves. Albumen, casts, blood and epithelium may be found, though with no constancy. Disturbed digestion, bloating, vomiting, burning pain in the pit of the stomach, constipation or diarrhea, colitis, appendicitis. Neurasthenia is usually marked, and at times the only symptom which calls attention to the condition. Nervous dyspepsia and movable kidney have become to mean almost the same thing. Muddy skin, loss of flesh and fever are also to be observed at times. Symptoms are usually made worse by being on the feet, and relieved by recumbency.

The catamenia usually increase the discomfort of the patient and cause the physician not infrequently to look to the pelvic organs for the seat of trouble.

Pain in the region of the appendix is the prominent symptom in ten to twenty per cent. of the cases. The thin, unfed appearance of the majority of the patients is due to the alimentary disturbance. In 1879 Keppler called attention to this feature of the disease.

The diagnosis of movable kidney is made by means of physical examination of the patient. For this purpose the horizontal position either upon the back or side is best. I personally do not like the upright, leaning forward to relax the muscles of the abdominal wall. Misplacements are not difficult to detect even in the stout when care is exercised and one is familiar with the method of examination. As the great majority are thin, palpation of the kidney is an easy matter. When the lower end of the kidney is found below the line of the umbilicus in conjunction with some of the symptoms given above, it can be reckoned as a movable kidney.

The frequency of occurrence is variously given. Of necessity the gynecologist will have a greater per cent. to record than the general surgeon, and, too, the surgeon than the general practitioner.

Kuster (Berlin) found 4.41 per cent. of his surgical cases with movable kidney.

Goelet and Edebohls, 20 per cent. in a gynecologic practice.

Harris (Chicago) had 56 per cent. in one hundred and twenty-six cases.

H. D. Beyea, 10 to 15 per cent. in a gynecologic practice.

Glenard, at the Thermal Hospital, Vichy, saw five hundred and thirty-seven cases in 4,215 persons examined.

Senator and Guttman record 1 to 3 per cent. only.

Treatment of movable kidney is essentially surgical. In times past the bandage and kidney pad was much worn, but since the advancement in surgical technic these means have been discarded. At best they did no good, and at times actual harm came from the pressure over the kidney. Menge reports albumen and blood in the urine of fifteen persons wearing the pad whose urine was normal before putting it on.

To Hahn (Berlin, '81) is due the credit of first performing nephrorrhaphy. The results were not gratifying in the early period of the operation, and even Billroth and Czerny were loth to perform it. Martin lost three out of four cases operated upon in '82.

The steps taken in the improvement of the procedure since the first operation of Hahn till to-day are indeed interesting. The application of the suture to the fatty tunic, the proper tunic and through and through the organ; suturing with catgut, animal tendon, fascia and aponeurosis of the same individual split off from the field of operation, silk and silk-worm gut. The paralumbar incision seems to have been adhered to, with occasional anterior exploration. As a support to the kidney it is suggested to sew the two layers of the perirenal fascia together under the kidney or to make a pocket for it behind the anterior layer of the lumbar fasciæ.

The aim in the operation of nephrorrhaphy being union with the lumbar fascia, a number of methods have been suggested whereby this may be brought about. After the removal of the fatty packing from the posterior surface, Basini suggested, before suturing the kidney in position, the use of 8 per cent. zinc chloride painted upon the tunica propria; Albarrans, 95 per cent. phenol or 4 per cent. argent. nitrate; Koenig packed the wound, keeping it open for six to twelve

weeks, to obtain a large scar extending to the posterior renal surface. Senn and Deaver, as well as a number of others, use the gauze packing under the lower end of the kidney for a few days. Beyea resorts to the rubber tubes with which he encircles the kidney, one around the lower end and the other about the upper. These left in place three weeks cause two band-like scars to form in their tracks after removal. Guyon first suggested the removal of the capsule to produce firm adhesions between the kidney and posterior wall. Various shaped flaps have been since recommended, these sutured into the wall or about bundles of muscle fibers. Tuffier claims the fibrous tunic of the kidney will not proliferate and take part in the scar formed by packing about the kidney or caused by irritants applied to it. No operation has been universally satisfactory, and the surgeon obtains the best results who can adopt that method best suited to the individual case. The danger to the patient in performing nephrorrhaphy is small, and depends rather upon complicating conditions than upon the operation itself. Edebohls found nineteen chronically inflamed kidneys and two acutely in one hundred and seventy-six persons operated upon for loose kidney. To Edebohls is due the suggestion to remove the appendix in operating upon the kidney, both being accomplished nicely through the lumbar incision. There are but few contraindications to operation; even enteroptosis, says Goelet, should not deter in its performance. Nephritis is directly benefited by the removal of the capsule and the liberating of tension and the bettering of the circulation.

The results recorded following the operation have of necessity a personal factor to be counted in. Experience with a requisite skill of an innate mechanical kind has much to do with the outcome of a series of cases. On the whole the operation may be said to give most excellent results and should cause practically no mortality in proper cases. At times some pain remains after a successful fixation. This is due to an appendicitis of a chronic character brought about by the formed disturbance in the mesenteric circulation. At other times unquestionable kidney irritation of a purely mechanical kind may be noticed for a while after the tight fixation of the organ subjecting it to pull during respiration or movements of the body.

LITERATURE.

- London Lancet, 1900, Vol. 1, No. 18, p. 1265.
 London Lancet, 1899, Vol. 1, No. 4, p. 215.
 London Lancet, 1900, Vol. 2, No. 22, p. 156.
 London Lancet, 1900, Vol. 1, No. 1, p. 15.
 Boston Med. and Surg. Jour., 1901, Vol. 1, No. 12, p. 318.
 Boston Med. and Surg. Jour., 1902, Vol. 146, No. 10, p. 243.
 Jour. Am. Med. Assn., 1901, Vol. 36, No. 22, p. 1527.
 Jour. Am. Med. Assn., 1900, Vol. 35, No. 14, p. 877.
 Jour. Am. Med. Assn., 1901, Vol. 36, No. 17, p. 1160.
 Jour. Am. Med. Assn., 1901, Vol. 2, No. 26, p. 1029.
 British Med. Jour., 1900, Vol. 1, p. 566.
 British Med. Jour., 1901, Vol. 2, p. 1135.
 British Med. Jour., 1900, Vol. 2, p. 833.
 Lancet, 1901, Vol. 2, No. 22, p. 146.
 Lancet, 1901, Vol. 2, No. 24, p. 1665.
 N. Y. Med. Jour., 1899, Vol. 70, Nos. 21, 22, 23, pp. 732, 800.
 Am. Gyn. and Obst. Jour., 1899, Vol. 14, No. 2, pp. 168, 151, 143, 162.
 Annals Surg., 1899, Vol. 29, No. 6, p. 706.
 Therap. d. Gegenwart, 1899, Vol. 6, p. 241.
 Cent. f. Chir., 1900, Vol. 27, No. 46, p. 1149.
 Med. Record, 1899, Vol. 55, No. 10, p. 341.
 Med. Record, 1901, Vol. 59, No. 8, p. 283.

FULL-CORRECTION AND UNDER-CORRECTION OF MYOPIA.

BY ARTHUR C. H. FRIEDMANN, of Colorado Springs, Colorado.

The last ophthalmological meeting in Heidelberg almost gave the impression that the under-correction of myopia was entirely discarded and a thing of the past. Not a single voice was heard to defend a method which had been practiced among the oculists of the whole world for a space of time equal to that of the existence of scientific ophthalmology.

The total statistics of Pfalz and Heine, who are strong advocates of the new theory, do not amount to two hundred cases, while the number of under-corrected patients must have been many thousands. How much easier, therefore, for them to see the disadvantages of the old method, which had been practiced for decades, than during the short period of practice to appreciate the weak points of the new one.

Having been for several years assistant of Prof. Koenigshoefer, I naturally became a follower of the principle of under-correction. Our rule was to correct every myopia from one diopter upward, so that the lenses were about one or one and a half diopters below the absolute myopia, if the comfort of the patient allowed us to do so, and when no affections of the fundus existed. Myopia above six or seven diopters we corrected just sufficiently to give the patient enough eyesight for average daily work and left part under-corrected in order not to strain the accommodation and to avoid micropia. Concave lenses above ten diopters we only prescribed for special purposes, such as use in observation cars, theaters, and so on. A lorgnon was permitted as a supplement; the most uncomfortable form of glasses was purposely given in order that the patients should not use them except when absolutely necessary.

In correcting myopes for reading, a lens two and a half diopters weaker was prescribed, so that they could see plainly up to 40 cm.

The combinations of myopia with astigmatism and insufficiency of the recti-interni were always carefully considered.

Especial care was taken to make it impossible that cases of spasm of accommodation should be mistaken for myopia, and no concave glasses were given to youthful individuals without applying a mydriatic for several days in succession.

We used to differentiate our cases with respect to the probability or improbability of progression of myopia, and in those in which we were satisfied that the fundus conditions were normal we quite frequently gave full-correction, provided it proved comfortable to the patient.

The pupillary distance was measured exactly in order to force the patient to see only through the optical center of the lenses, so as not to get any of the undesired astigmatic or prismatic effects of the edges.

One of the most important points was to keep the myopia, especially in youthful individuals, under steady observation, and not to allow at the utmost longer than half a year to elapse between examinations. We often found that during the interval the myopia had somewhat decreased, in which event weaker glasses were given. Meyerhof reports a case of a youthful myope which showed, in 1898, 11.0 D, and was corrected with 6.0 D; in 1899 the same patient had

with the same visual cavity 10.0 D, and the following year 9.0 D. It seems rather improbable, he says, that, with a myopia of 11.0 D, where the back part of the bulbus is considerably stretched and its elasticity almost entirely lost, the fovea centralis should have moved more than 0.6 mm. to the front.

When the refraction had not altered, no change was made; when it was found that the myopia had increased, subjectively, a mydriatic was employed; and when the objective results did not harmonize with this increase, we continued the instillation of mydriatics. Usually atropia, one per cent., was used for quite a length of time, and this was done even in adults up to thirty-eight or thirty-nine years of age; and frequently we had the satisfaction of finding that the increase of myopia was only a seeming one, and that the same or even weaker lenses were accepted afterward.

This has been the practice of almost all German oculists, and up to the present time the great plurality of them have not deemed it necessary to change their standpoint, although Foerster, Risley and several others have called attention to the advantages of full-correction from time to time. It has been asserted that it is for theoretical reasons only that the profession has not followed any of these impulses, but according to my experience I would say that just the practical side of it—*i. e.*, the discomfort in wearing full-correction for distance and the greater discomfort in wearing the same for reading—determined me, like the others, to look somewhat skeptically on the supposed excellent results of full-correction.

The strongest point of the new theory is the possibility of diminishing the progression of myopia. Several points have to be considered when we speak of this disease. One of the most important is the age of the patient; and while we used to believe that the ages from fourteen to twenty-one years were the most dangerous, we are now convinced that it is far more so during the period between six and fifteen. The degree of myopia is another important factor, and especially the cases of more than ten diopters show a tendency to pernicious progression. The heredity of the patient and his occupation are other features to be considered.

The period during which we must observe our myopes ought to be an unlimited one. If a myopia progresses in one year from 4 to 6 D, it is to be considered a rapid case; while another, progressing the same amount in six or eight years, is slow and not very dangerous. If a myopia of 14 D progresses to 16 D, it means far more anatomically than one progressing from 4 to 6 D.

All these points should be supported by extensive statistics, and if Dor in Lyon really has fully corrected for the last ten years and a half, he ought to publish his statistics, giving his results on the above mentioned points, as well as on many others. The small publications of Rueckert, Priestley Smith and others, with their selected cases of low-degree myopia, are not decisive. These statistics should be put up, as Meyerhof says, "*sine ira et studio*." They should give us reports of the entire childhood of the patient, and ought to take in a period of not less than four or five years.

If full-correction proves not injurious, it surely offers great advantages in giving to the myope the natural conditions, for instance, of accommodation and convergence; if we have a chance of making the myope emmetropic, we certainly will grasp it with great readiness.

The following is an extract from a letter which I received from Dr. Knapp, of New York:

“Full-correction in myopia, with good sight and no danger of fundus changes, is in my opinion the correct treatment. Abnormal—*i. e.*, morbid—conditions: impairment of sight, rarefaction of chancroid, congestion and hemorrhage in fundus, vitreous opacities, maculae corneae, etc., will prohibit full-correction in many persons. The diminution of print and other fine work require more exertion to see clearly with a strong than with a weak concave glass.

“My rule is to enable such people to read about 20-70 and let them wear these glasses for all ordinary purposes, allowing the full-correction for galleries, theaters, prospect cars, etc. Persons that have used full-correction without inconvenience in their younger years I frequently advise an under-correction for fine, near work when they are thirty-eight to forty years of age or more.

“The patient’s habits, occupation and preferences should also be considered in the choice of glasses.”

The anatomical investigations of Heine and the sentiment of the Heidelberg Congress, as well as of the Ophthalmological Society of the United Kingdom, are so unanimously in favor of full-correction that I hope they will induce every oculist to give the closest attention to the effects of his method of correcting myopia.

I think that I shall try to individualize all cases of myopia that come under my observation. I shall also endeavor to take a step toward the system of full-correction by moving from decided under-correction to slight under-correction.

A general full-correction I will not consider before exhaustive statistics have proved it absolutely beneficial.

CLINICAL REPORTS.

FACTITIOUS ULCER OF THE FOOT.

By M. F. ENGMAN, M. D., of St. Louis, Missouri,

CHIEF OF DERMATOLOGIC CLINIC, POLYCLINIC, MEDICAL DEPARTMENT WASHINGTON UNIVERSITY.

Artificially-produced eruptions are always of especial interest from a diagnostic point of view. They are, of course, very often produced to escape work, excite interest or charity; to gain admittance to hospitals or charitable institutions, but are also in many cases of neurologic interest. The lesions produced upon the skin will often baffle the most careful observation, but usually are of characteristic appearance. The diagnostic points given in every text-book upon diseases of the skin, if always remembered, will generally be sufficient to diagnose a suspicious case. One is often, however, caught "napping," and a clever, educated and neurotic patient will sometimes produce lesions which force us upon our own ingenuity to make a diagnosis. These latter cases will produce crop after crop of the most peculiar and correct pathologic lesions, as if made by Dame Nature herself—then the physician, if he is puzzled or at all suspicious of self-mutilation, should become apparently careless, yet quietly more careful; the patient thus having "more rope" will soon cease to be as accurate in her manipulations and produce a characteristic factitious lesion.

Another excellent assistance in diagnosis is by biopsy, and the consent to this procedure is usually readily obtained from these neurotic patients. A small piece should be excised from the edge of the lesion, including a line or so of healthy skin. Upon sectioning and staining this the homogenized or cauterized epidermis is plainly shown in comparison to the healthy portion alongside of it. Such a section was lately shown me by Dr. Carl Fisch of this city, which was taken from a neurotic woman who secretly produced very puzzling lesions upon her skin. She afterwards confessed she had produced them with carbolic acid. The case we wish to report is as follows:

Mrs. X., aged forty, came to the polyclinic hospital (service of Dr. Hardaway) for an ulcer of the foot. She was referred by a very competent and experienced physician, who was greatly puzzled by its appearance. The provisional diagnosis made by us upon the first visit was that of syphilitic ulcer, from the ulceration, the scalloped border, sharply defined infiltration, and discoloration of apparently former lesion on the leg. Specific treatment was given and the ulcer dressed with a bichloride poultice. The ulcer grew rapidly from day to day, and upon each visit we found that our dressing had been removed. The patient was markedly hysterical (?), crying upon the least provocation, and volubly recited her many troubles and wrongs. She also complained of great pain in the ulcer, crying out upon the slightest touch. This was affected, as upon engaging her in conversation another could rather roughly handle the foot without eliciting any complaint. These points aroused our suspicions and it was decided to watch her. The wet dressing was reapplied and a bottle of the solution given her to apply herself, thereby allowing her more opportunity to catch herself as it were. She did. In a few days she returned, the ulcer had greatly increased in size; at the anterior-inner and anterior-outer edge were typical sharp angles which could

not be produced by pathologic processes. Upon these two features it was decided that the ulcer was self-produced. But upon studying the accompanying photograph many similar angles and points can be seen; however it must be admitted that the ulcer is most artistically and carefully made, the patient taking pains to produce more artistic curves than sharp angles. At the border of the ulcer there were never seen papules or other lesions characteristic of syphilis. The discolorations upon the leg were probably similarly produced.

From an unguarded ejaculation made upon examining the lesion, the patient at once took the hint and inquired if we thought she had produced it with car-



bolic acid, when none of us connected with the clinic had hinted at such an accusation. The sentence "I thought so" had probably aroused her suspicions.

The foot was redressed, but a crinoline bandage was placed over the dressing, and the patient given instructions not to dare remove it. She never returned.

Her family physician states that she is very neurotic and he thinks she produced the ulcer to awaken the sympathy of her husband and thus obtain a servant to assist her, which she did not have previous to her disablement.

I am indebted to Dr. H. P. Wells for the excellent photograph accompanying this report.

DETACHMENT OF THE AURICLE FOR THE REMOVAL OF
A MIGRANT FOREIGN BODY IN THE EAR.

BY JAMES MOORES BALL, M. D., of St. Louis.

Detachment of the auricle, as a step necessary in the removal of foreign bodies in the ear, is rarely required. Some writers on aural surgery, in days gone by, regarded this operation as unnecessary and unjustifiable. Some years ago Theobald,¹ in discussing the operation of detachment of the auricle for the removal of a foreign body in the auditory canal, said he could "scarcely conceive of a case which would warrant recourse to such an expedient;" and in a recent article² on the subject he reiterates this opinion. No doubt this distinguished author had in mind only foreign bodies introduced through the external auditory canal.

In the case about to be reported it is evident that less heroic measures would have been useless.

Mr. M., insurance agent, aged fifty-two, was brought to me June 12, 1902, by Dr. Foreman, of Kane, Illinois. The patient is a strong, healthy-looking man. Ten years ago the right ear was the seat of a purulent otitis media, which seems to have left no evil effects, the membrana tympani appearing to be normal and the hearing power fully retained. For the last three years the left ear had been the seat of frequent attacks of pain and inflammation with occasional discharge of pus. Recently there has been pain in this ear during mastication. The hearing power—watch at three feet. The tuning-fork shows no impairment in the auditory nerve. Mr. M. has been under the treatment of two general practitioners and three specialists for the greater part of two years. One gentleman seized a substance within the auditory canal with forceps, which he broke in attempting to deliver a mass which he regarded as a foreign body. Another stated that a series of operations would be required to give relief. Mr. M. denies that he ever placed a foreign body in his ear, that any foreign substance had gained access to the part.

Examination showed the presence of a thin, purulent discharge. At a point approximately 10 mm. in front of the tympanic membrane is a black mass completely occluding the auditory canal, except at its lower anterior part, where there is a minute passage permitting the escape of pus and the passage of a No. 2 lachrymal probe. On touching the mass with the probe a metallic sound was produced. Tyrrell's iris hook was passed beneath the mass, which was found to be only slightly movable, giving the sensation of almost solid fixation. The diagnosis of foreign body was made and an operation for its removal was advised after a trial of syringing, the use of the hook, etc., had failed. The patient was sent to the Jefferson Hospital, where, with the assistance of Drs. Leo, Caplan and W. B. Shields, the following operation was performed:

An incision three and one-half inches in length was made posterior to the attachment of the auricle. The periosteum was separated from the posterior part of the osseous canal and the auricle detached. A black body was found firmly wedged into the soft parts and lying almost at right angles to the audi-

¹ Buck's *Reference Hand-Book of the Medical Sciences*, N. Y., 1886.

² *American Text-Book of Diseases of the Eye, Ear, Nose and Throat*, p. 710. Philadelphia, 1899.

tory canal. This mass was seized with artery forceps and pulled out, considerable force being required for its extraction. It proved to be part of a knife blade, fifteen-sixteenths of an inch long, seven-sixteenths broad and one-sixteenth thick at its base (Figure 2). The auricle was replaced, catgut sutures being used, and a gauze tampon inserted into the auditory canal. Healing was uneventful.

On showing the specimen to the patient he acknowledged that twenty years



FIG. 1.—APPEARANCE OF WOUND IN DETACHMENT OF THE AURICLE.

The forked black line indicates the wound made by the knife blade. Its width is exaggerated by reason of the "running" of the India ink used in tracing it.



FIG. 2.—KNIFE BLADE (ACTUAL SIZE).

ago, during a fight, he was stabbed with a pocket-knife. Careful examination shows a small scar situated above and in front of the external auditory meatus. In the accompanying photograph the scar has been purposely marked in ink the better to show its location. The patient states that the knife was of ordinary size—i. e., its blade was about two and one-half inches in length—and that the surgeon who attended him regarded the wound as trivial and did not explore it. Evidently the foreign body was a migrant.

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EDITED BY

WILLARD BARTLETT, M. D.
MALVERN B. CLOPTON, M. D.
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OTHO F. BALL, M. D. Managing Editor.

COLLABORATORS:

MAX MICHAELIS, M. D.,
Docent of Internal Medicine, University of Berlin, Germany.

FRANZ NEUGEBAUER, M. D.,
Professor; Director of the Evangelical Hospital, Warsaw, Russia.

JULIUS NEUMANN, M. D.,
Docent of Obstetrics and Gynecology, University of Vienna, Austria.

JULIUS SCHNITZLER, M. D.,
Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,
Berlin, Germany.

Address all communications to the INTERSTATE MEDICAL JOURNAL, LINMAR BLDG., ST. LOUIS, MO.

EDITORIAL COMMENT.

THE NECESSITY FOR PURER MILK SUPPLIES FOR OUR CITIES.

This is the time of the year when the summer diarrheas of children are claiming their annual sacrifice of human lives. How great that sacrifice is we do not always stop to consider. In the summer of 1900 the number of deaths among children from summer diarrhea in Baltimore was *three times as great* as that from consumption, the "scourge of the race."

Holt recently collected 1943 fatal cases of diarrhea in children; of these but three per cent. were exclusively breast fed. The association between this disorder and artificial feeding is sufficiently striking. For obvious reasons cow's milk must be the main substitute for infants who cannot be nourished at the breast. And, just as obviously, every attempt should be made to have that substitute as pure as possible. The question of modification of cow's milk is now attracting the attention of pediatricists the world over, but, as Jacobi has well said, clean milk is far more important than any amount of modification.

The milk supply of many of our cities is almost inconceivably bad. Adulteration with water is almost the rule. Owing to the lack of cleanliness in the methods of obtaining and handling the milk, the bacteriological content is enormously high, so that in order to deliver it in any sort of condition the addition of preservatives and coloring matter becomes routine procedure.

Of late years the profession at large has begun to realize the imperative necessity of improving this deplorable state of affairs. The establishment of so-called milk commissions has done much to change things for the better in some places.

It has been demonstrated that it is possible to secure pure, though not absolutely sterile, milk, and it has been shown that dairymen can furnish such milk for general consumption at a fair profit to themselves. "Certified milk"—that is, milk that has been passed upon by a commission of experts—is obtainable in some of our cities. Many institutions, such as the Trinity Diet Kitchen of Chicago, have shown that good pure milk *can* be obtained and distributed to the poor of our larger cities.

The solution of the problem has been pointed out by these examples; it rests with the profession to rouse itself and see that these examples become the rule rather than the exception. For this is a question of the first importance. This is the day of prophylactic medicine. Surely this condition of things should not be allowed to exist any longer.

TENDON TRANSPLANTATION.

While the first attempt to relieve the deformity and give added power in paralytic equino-varus was made in 1881 by Nicoladoni, the transfer of tendons is an old, if forgotten, procedure, dating back to Velpeau and Malgaigne, who employed it, as did others of their time, in traumatic deformities about the hand. Recently interest in tendon transplantation has been renewed by the reports of many American orthopedic surgeons, who have since 1892 employed this operation rather extensively. Beginning as a means for the relief of paralysis due to local loss of tendon, it was next applied to spinal palsies, and more recently, through the enthusiasm and skill of Eulenburg, the field has been enlarged to include infantile cerebral palsies, and this writer predicts that it will soon be used in peripheral paralysis of all kinds. The numerous adaptations of the power transfer idea, whether it be a portion of a healthy tendon grafted onto a paralyzed tendon, or the whole of the active tendon into a paralyzed tendon or onto a new body attachment, or a healthy muscle transplanted into a paralyzed tendon, or a strong muscle to energize a partially paralyzed one, all tend to replace what power has been lost and to prevent further deformity. For a satisfactory result it is not necessary to joint synergic tendons; but if the mechanics of the parts are correct, flexors can be made to do the work of extensors, and *vice versa*, and the point of application of the force may be well away from the normal channels of force. Not unusually the enthusiasm for a new procedure carries the hopes well beyond what is rationally to be expected. So if we judge of the results of tendon transfer by normal function as a standard (in the foot, for instance, by the ability to carry out the normal movements and assume the normal posture when in use), we must conclude that in many instances the operation is essentially palliative, and that it will supplement rather than supplant a mechanical support. On the other hand, in many of the less hopeless cases the results are brilliant, and all apparatus can be dispensed with. The main object of the operation is to remove a force that, if left alone, will only distort and make it act to replace the power lost by the paralysis. It cannot be expected, for instance, that two feeble muscles such as the peronei, when transplanted into the tendo-achilles, will replace the function of the strong calf muscles; but a distorting dorsal flexor has been removed, and in its new endeavor aid progression not only by plantar flexing the foot, but also by holding the bones of the foot in close apposition to the ankle. At the knee, where the sartorius is so

frequently spaced when the quadriceps is lost, its transplantation into the patella tendon above the joint allows almost normal extension and corrects the peculiar flail-twist gait. And, though the later reports show that the early anticipations of the operation's adherents were, perhaps, too sanguine, it is proven that a great general gain is obtained, and the operation never impairs, and so must be classed as classical among the available surgical procedures in this unfortunate paralytic condition.

THE DISREGARD OF FOREIGN LITERATURE.

A writer in a recent German publication scores the English for their disregard of foreign literature. He claims they are constantly bringing forth what they term new ideas and new methods of treatment, which if due reference to foreign literature were made they would be found not only in practice, but oftentimes long since discarded as failures. This he claims to be especially the case in most of their recent writings on otology. Several examples are given illustrating their superficial knowledge of the German medical literature.

The reason for this he cannot explain, but believes it may possibly be due to the fact that Englishmen do not care for any other language but their own, or that they are too busily engaged with their practices.

Be that as it may, instances of this kind are found frequently in other countries as well as England. Even some of the German writers have put themselves on record as ignoring the work done by others, especially anything American.

While this may be in a measure pardonable in communities where library facilities are inadequate, but it is certainly not in Europe, where the libraries are sustained by their respective governments, and everything published in medicine can be found.

Quite different is the situation in our own country, where the government does not aid institutions of this kind.

In some cities private citizens have taken enough interest in the advancement of medicine to establish well-equipped libraries, but unfortunately in our own city the library association does not receive the support and encouragement it should, especially is this true of the medical profession. As long as such apathy exists our library can never be a complete one, and we are prone to be subjected to the same criticism as our English cousins.

ANOTHER "TICK-BORNE" DISEASE.

Theobald Smith proved conclusively that a tick infects cattle with Texas fever by its bite, the organism of that disease leaving the body of the tick and entering the blood of the bitten animal. Ross, Manson, Grassi and other Italian investigators have demonstrated that the mosquito may disseminate malaria by its bite. It is to the efforts of Reed and Carroll, and the self-inflicted martyrdom of Jesse Lazear, that we are indebted for the knowledge that the *Stegomyia fasciata*, a variety of mosquito, conveys the organism—animal or vegetable, whatever it may be—of yellow fever from man to man. The agency of flies in spreading typhoid fever was rather well demonstrated in the camps of mobilization during the Hispano-American war. With these facts before them, sanitarians are preparing to wage vigorous warfare on these epidemic diseases, which ought to be easily eradicated from the literature of medicine as population-

depleting agencies. The watch-word for preventive medicine will be the destruction of these different genera of mosquitos, ticks, and flies.

Of decided interest in this connection is the preliminary report recently made to the Montana State Board of Health by Wilson and Chowning on "The So-called 'Spotted Fever' of the Rocky Mountains" (*Jour. A. M. A.*, July 19, 1902). These investigators made a clinical, pathological-anatomical study and bacteriological research of an epidemic of so-called "spotted fever" in a limited portion of Montana. The disease must not be confounded with "spotted fever" or epidemic cerebro-spinal meningitis, which is caused by the intracellular diplococcus of Weichselbaum. Spotted fever of the Rocky Mountains has been recognized as a clinical entity by local physicians for over fifteen years. The disease has shown a markedly fatal behavior, so far as medical literature in the West can inform us. The most pronounced feature of this affection is a purpuric-like eruption over the entire body, with high fever, which becomes normal and sub-normal just prior to death. But little pain is encountered in this disease. The blood shows parasites when freshly examined. In six autopsies made by these two investigators, petechial hemorrhages were found in the epicardium. The spleen was enlarged, and both kidneys showed subcapsular hemorrhages. Histologic examination of the skin in the affected portions showed a congestion of the capillaries, and many red cells in the congested capillaries contained parasites. Bacteriological examinations of the different organs gave nothing characteristic of a special *vegetable* parasite which could have provoked the disease. Direct coverslip preparations from the different organs showed up the parasite. The organism was well stained in the Nocht-Romanowsky blood-staining fluid. The organism showed ameboid movement in the fresh state. It was a body larger than the pyrosoma bigeminum of Texas fever, and it contained no pigment. Rabbits were infected with the organism by injection of 0.5 c.c. of the splenic pulp from one case. The writers will probably give a more complete account of the organism in their final report.

The mode of infection in these cases is of particular import, showing, as it does, a resemblance to the manner in which Texas fever is spread, namely: that each of the patients with spotted fever showed evidences of having been bitten by ticks. There are no instances on record of spotted fever having been conveyed from man to man directly. The following facts have led these writers to believe that spotted fever is transmitted through the medium of the bite of a tick:

1. Ticks do not become very numerous in the region in which this epidemic occurred until the latter part of April. At this very time the epidemic took place.

2. Ticks disappear about the middle of July. At that time cases of spotted fever also began to die out, there being no new cases after the 20th of July.

3. The fact that spotted fever occurred in a region confined to a small space, limited sharply to one side of a river, indicates that if due to a parasitic animal acting as an intermediate host, that host must be one which travels slowly and not widely; such a host would be the tick.

4. All hematazoon of warm-blooded animals pass through one stage of development in the body of an intermediate host.

5. There are three distinct genera of ticks in the region in which these cases occurred, any one of which may be the intermediate host of this protozoon.

6. All of the patients had been bitten by ticks.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

Recent Results from the Use of "Cancroin" in Carcinoma of the Tongue, Larynx, Esophagus, Stomach and Breast.—ADAMKIEWICZ, Vienna (*Berliner Klinische Wochenschrift*, June 16, 1902), reports a number of cases of carcinoma treated with "cancroin." The results here described show the practicability of his treatment, based upon the parasitic theory of cancer.

A case of cancer of the tongue, in which the tumor completely filled the oral cavity, rendering eating, drinking, speaking, etc., almost impossible, yielded very promptly to the injections of "cancroin." The disease had existed for three years. Eight weeks' treatment—sixteen injections—brought about an absolute cure. The tumor and its metastases disappeared entirely and all subjective symptoms were relieved.

A case of cancer of the larynx was taken in hand after large tumors had developed on the neck and tracheotomy had been made. At the time of this report, viz., after one month's treatment, the tumors were rapidly disappearing, the patient was gaining strength, and symptoms of obstruction, etc., were being relieved.

A case of cancer of the esophagus in a woman thirty-nine years of age was also promptly relieved. Symptoms of esophageal obstruction caused her to apply at the Breslau clinic. Carcinoma was demonstrated through the esophagoscope by Prof. Eiselsberg, and gastrostomy was made. No improvement being noted the patient came to Vienna. Within five days after cancroin injections were begun the tumor, which was of four months' standing, began to decrease in size, and with it the symptoms decreased in severity. Within six weeks the patient was able to swallow solid as well as liquid diet, the tube was removed and the fistula closed. The patient returned home and was gaining about a pound a week.

A patient, thirty-eight years of age, presenting marked gastric symptoms, vomiting, pain, loss of weight, etc., applied at the Nothnagel clinic for treatment. A diagnosis of cancer of the stomach was made. The patient was told that nothing could be done for her and she was advised to return to her home. She afterwards applied to the author, who recognized the importance of acting promptly. After the first injection decided improvement was noted. Within one month all symptoms had disappeared and the patient returned to the Nothnagel clinic practically cured.

Two cases of cancer of the breast are reported which had been operated upon, recurrence followed, and the patients were pronounced lost by some leading authorities. In both of these, cures were effected.

Remarks on the Paper of A. Adamkiewicz on "Recent Results from the Use of Cancroin in Carcinoma of the Tongue, Larynx, Esophagus, Stomach and Breasts."—NOTHNAGEL, Vienna (*Berliner Klinische Wochenschrift*, July 14, 1902), feels called upon to make some explanation concerning case No. 4, in the report of Adamkiewicz (see above abstract—Ed.). The record in his clinic shows their diagnosis to have been "cystopyelitis, anaaciditas, (Ca?)" At that time the patient presented symptoms which pointed to the possibility of the existence of carcinoma of the stomach, viz., emaciation, vomiting after eating, very pale,

pain in the region of the stomach upon pressure, and no free hydrochloric acid in the stomach contents. He lays special stress upon the fact, however, that an absolute diagnosis was not ventured, because of the absence of a tumor, lactic acid, etc., and that the symptoms present were such as might characterize also a functional disturbance in which there existed an anacidity. He does not recall what was said to the patient, but it is not his practice to give to hopeless cases such statements as are attributed to him in this report. Attention is called also to a letter which was received from the patient after her return to her home "cured," requesting that he send something to relieve her vomiting.

Observations on the Paper of Professor Adamkiewicz: "Recent Results from the Use of Cancroin," etc.—VON EISELSBERG, Vienna (*Berliner Klinische Wochenschrift*, July, 14, 1902), calls attention to the case of carcinoma of the esophagus mentioned in the article of Adamkiewicz (see above abstract—Ed.) in which he claims to have brought about a marked improvement through injections of "cancroin."

When the patient applied at the clinic she was being fed through a gastrostomy fistula. The esophagoscope revealed a cauliflower excrecence at the cardiac end of the stomach. There could be no doubt as to its malignancy. No sections were made. It is reported that she improved greatly on cancroin injections and returned to her home. The author thinks it quite probable that this improvement was due to the sloughing away of part of the tumor, which so frequently happens in carcinoma of the esophagus.

With but one exception (see following abstract) no permanent results have been seen from the use of cancroin. Most of these cases have been reported by Adamkiewicz alone, when but a few weeks had elapsed since the employment of the injections. The author bases his opinions upon the destructive criticism of Billroth, Albert, Kaposi, Kundrat, etc., upon occasions when Adamkiewicz's "results" were presented before medical bodies.

A Case of Carcinoma Cured by Injections of Adamkiewicz's Serum (Cancroin).—KUGEL (*Berliner Klinische Wochenschrift*, June 16, 1902) reports a case of carcinoma of the breast in a patient fifty-three years of age. The first evidence of the growth manifested itself ten years ago as a small nodule in the left breast. This was removed. Three more operations were done within the next six years, in which the axilla was cleaned out and two-thirds of the breast was removed because of metastases. The whole breast was finally removed. Repeated microscopical examinations of the tumor and lymphnodes showed the growth to be carcinoma. After two years metastases appeared in the left supraclavicular space, the fourth costal cartilage was pushed forward, a nodule appeared in the other breast, the left arm became painful and edematous. There was a difference of opinion as to the advisability of another operation among the Bucarest surgeons and the patient was taken to Vienna. Here, further surgical interference was pronounced useless. The serum of Adamkiewicz was then employed in the treatment of the case, and was continued for a number of months. The pain and edema began to decrease after the first injection, and further development of the nodules was brought to a stand-still. When the injections appeared to have no further effect upon the tumors they were discontinued. About two months later the nodules and the infiltration began to decrease rapidly, and within a period of one month had disappeared. The nodule in the supraclavicular region, which had grown to the size of a hazelnut, the nodule in the right breast, the protrusion of the fourth costal cartilage, as well as the cancerous infiltration of the right breast disappeared entirely and have shown no signs of recurrence in the past four and a half months.

The author concludes with the assurance that there can be no doubt as to

the nature of the growth. The patient was observed clinically by most competent authorities, and microscopical sections were examined by most experienced pathologists. He concedes, however, that it was not one of the most malignant types of carcinoma, as is shown by the length of time of development.

The Treatment of Carcinoma with Cancroin (Adamkiewicz).—POTEN, Hannover (*Berliner Klinische Wochenschrift*, July 14, 1902).—It has been twelve years since Adamkiewicz first recommended the use of cancroin in carcinoma. The matter has received little attention because of the incompleteness of the reports. A recent paper by Kugel prompted the author to try it in two cases. The first was a case of inoperable carcinoma of the uterus. The injections were continued for a period of one month, in fact until the patient died. Frequent examinations were made during the time, but no changes were noted either in the size of the tumor nor its microscopical appearance. Change in the structure of the carcinoma, a diminution in the size of the cell-nests, necrosis of the cells nor any other manifestations of retrograde changes in the growth could be noted.

The second was a case of recurrent carcinoma of the breast. In spite of the treatment, the tumor was unabating in its growth. The injections caused no change either in the character of the tumor or the subjective symptoms produced thereby.

In view of the wonderful results published by Adamkiewicz, the author suggests that the preparation should be more generally tested

A Large Myoma of the Uterus, Undergoing Carcinomatous Degeneration, Treated with Cancroin (Adamkiewicz) Without Result.—SCHULTZ, Schultzenstein (*Berliner Klinische Wochenschrift*, July 14, 1902) employed cancroin in the treatment of a case of inoperable carcinoma of the uterus, which developed on the base of a myoma. One-half ccm. to one ccm. was injected daily for four months without any results. After each injection the patient became very dizzy, and was compelled to lie down. Otherwise no unpleasant symptoms arose from the injections. During the entire treatment seven bottles were used, each containing ten ccm. Some influence seemed to be exerted upon the enlarged inguinal nodes through the treatment, inasmuch as they would decrease and enlarge as the injections were continued or discontinued. Whether any inhibitory action was exerted upon the growth during this period cannot be definitely stated. It can be said, however, that the cancroin exerted no curative action in this case.

Asthma Dyspepticum.—EINHORN (*Zeitschrift fuer Klinische Medicin*, vol. xlv, parts 5 and 6, 1902) considers the term "asthma dyspepticum" applicable only to those cases of asthma in which the thoracic organs are found in a perfectly normal condition, but which seem to bear a definite relationship to the digestive organs. In this particular he does not agree with certain other authorities. When the heart or lungs are involved, he does not feel justified in attributing an asthmatic condition to digestive disturbances, even though the symptoms bear a certain relationship to the ingestion of food. It is quite apparent that a full stomach aggravates dyspnoeic symptoms, whatever the source.

The author includes in his report thirty-one cases of "asthma dyspepticum" in which the thoracic organs were apparently in normal condition. These are divided into two classes: (1) Cases in which the asthmatic symptoms arise periodically in acute form, and (2) those which take on a more or less chronic type. The first class is characterized by periodical attacks of asthma either without any apparent cause, or following excesses in eating, drinking, etc. These are usually very severe, and manifested by dyspnea, cyanosis, collapse, etc. The second class includes by far the greater number of cases, and may be divided into (a) those which occur shortly after eating, without any definite

cause or following slight exertion, and (b) those which occur two to three hours after eating. The former (a) resemble greatly cases of angina pectoris due to arterio-sclerosis, and are frequently differentiated from them with great difficulty.

Gastric analyses were made in many of the cases. Though no constant disturbance was found, it seems rather remarkable that in a large number of cases achylia gastrica was determined, while in another series hyperchlorhydria. These two conditions are exactly opposite to one another. The treatment indicated in each invariably gave relief to the asthmatic symptoms. In either case, the author thinks the asthmatic symptoms due to gastric irritation; in hyperchlorhydria it is due to an excessive amount of acid, while in achylia gastrica it is due to the undigested food particles. In those cases in which the gastric secretions were found normal, one must assume the existence of a hyperesthesia of the stomach.

Hepatoptosis was found in a number of the cases, and in all probability had much to do with the development of the asthma through the effects of such a displacement upon the diaphragm.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Use of the Intestine as a Urinary Receptacle.—DRUCBERT (*Archives Provinciales de Chirurgie*, Tome xi, Nos. 5 et 6).—This most valuable review of the work which has been done along this line is prefaced by a few interesting physiological deductions. The fact that the human embryo as well as the adult of many animal species have a cloaca, was the inspiring cause of surgeons first attempting to drain the ureters into the intestine. An analogous condition has been congenital in a few instances, or has been brought about by the perforation of a vesical calculus into the rectum. A few of those thus afflicted have survived the condition without apparent ill effects. The five dangers of an operation which contemplates the implantation of the ureters into the intestine are peritonitis, insufficiency of the suture, intolerance of the rectal mucous membrane, stenosis of the ureteral outlet, and ascending pyelo-nephritis. Section of the ureter high up is much more dangerous than if the lower end be involved in the operation, since the last-named portion of the tube has a somewhat sphincteric action. Various methods of anastomosing these structures have been tried: lateral implantation, direct implantation of the free end, oblique implantation after the manner of the entrance of the healthy ureter into the bladder, and anastomosis with a button. This last has given the most satisfactory results, and must be considered the best in an accident. Vesico-rectal, as well as vesico-vagino-rectal, fistulae have been purposely established, but without satisfactory results. Implantation of the trigone and ureters, inclusive, has given far better results than any of the other operations mentioned above. Especially is this true of the human subject. The author tried it on nine dogs, of which only one lived a year. The chief reason for the ascending pyelo-nephritis is the reflux of urine from the bladder, this due to the pressure generated in the strain of defecation. The author sums up his review by stating that this manner of emptying the ureter is generally unsatisfactory at best; hence the operation, however done, is to be regarded only as one of necessity. Where a ureter for any reason cannot be implanted into the bladder, it is best, if an external fistula is not desired, to remove the kidney or ligate the ureter, provided, of course, a healthy organ is known to exist on the opposite side.

Anchorage of Tendons in Partial Foot Amputations.—CALE (*The Railway Surgeon*, July, 1902.)—The author relates the histories of two cases which illustrate the value of the point under discussion. The first patient was a railway conductor, the forepart of whose foot was torn off at Chopart's joint while he was attempting to couple some cars. To give the man a useful ankle-joint, Doctor Cale sewed the tendons of the foot to the plantar of the sole flat. The patient's recovery was uneventful and the ankle-joint is unimpaired in usefulness, while in walking the man limps no more without than he does with an artificial foot. At present he wears an ordinary pair of shoes by simply stuffing out the empty portion of one with curled hair.

The same principle is illustrated in a second case treated by the same author. This patient was a brakeman on whom a Chopart amputation had to be done. The tendons were anchored in similar manner, and the result, both anatomically and functionally, is equally as good as that in the first case.

In closing his article, Doctor Cale makes the assertion that, in his belief, these tendons should be invariably fastened to the periosteum, or some of the other structures of the sole, in order to guarantee a useful foot and ankle.

Indications and Prognosis of the Operations for Rectal Carcinoma.—JAFJE (*Archiv fuer Klinische Chirurgie*, Bd. lxvii, Hft. 1.)—The author lays particular stress on the fact that the best way to examine a rectal tumor is with the finger, unaided by speculum or other mechanical contrivance. If the growth be very high, it may be advisable to introduce the entire hand; but this has its disadvantages, and is further not necessary in most cases. In order to get the very best results, the patient should be in the standing position and press down as hard as possible, in which event the examiner can feel a mass which would escape him if any other method of investigation were used. If the anal portion must be removed at the operation, it is helpful to make a transverse incision in the perineum, and from this dissect the anterior wall of the rectum in very much the same way as one does when removing a prostate. When the tumor is as high as four and one-half cm. above the anal ring, it is possible to save the latter and make a circular enterorrhaphy; but this latter can be done only in case there is no tension on the stitches. Where there is no lymphatic involvement, the permanent results are about twenty per cent. to thirty per cent. of cures, and the mortality about five per cent. to ten per cent. It must be said, however, that the ultimate prognosis in woman is better than in man.

A Case of Cerebral Hemorrhage Following Chloroform Anesthesia.—BOUREAU (*Revue de Chirurgie*, July, 1902).—The patient under discussion presented herself for an operation for two small tumors, one on the forehead and the other on the neck. During the procedure the patient showed no effect of the chloroform other than that usually seen under similar circumstances; in fact, there was no failure in respiration at any time, and, indeed, no vomiting at all. However, when she was placed in bed it was noticed that she was extremely pale, that the respiration was labored, the pulse small, and the extremities cold. In a few hours the condition improved somewhat, and at the same time it was noticed that she had a partial one-sided paralysis. From the fourth day, however, she improved in this last main respect and at the end of several weeks was entirely recovered from its effects. If she had died from the cerebral hemorrhage while under chloroform, there is no doubt that this would have been accounted another death due to chloroform, and the explanation of the case would have been no clearer than is usual under such circumstances. The author's explanation for the conundrum is that the chloroform produced an intense hyperemia of the vessels of the brain, and that one of the same burst during the stage of excitation which is so well known.

The Surgical Treatment of Ascites Due to Serosis of the Liver.—BALDWIN (*Journal of the American Medical Association*, July 26, 1902).—The author relates the history of three cases, in the first of which there was a slight accumulation of fluid; the omentum was attached to the peritoneum, after which the patient made a prompt recovery and was at the time of writing perfectly well.

In the second case there was a large amount of fluid and the same operation was done. At first there was some reaccumulation of fluid, but on the fourth week the woman went home perfectly well; however, she died of exhaustion three weeks later, but the fluid had not returned.

The third patient was a drunkard with a large amount of fluid. After an attachment of the omentum the fluid reaccumulated and the patient died a few months later.

Here seems to have been one good result out of three cases, but in this one it must be added there was next to no fluid to begin with, although at the time of operation the liver was seen to be markedly hob-nailed.

Extensive Intestinal Resections.—PAYR (*Archiv fuer Klinische Chirurgie*, Bd. lxvii, Hft. 1).—The author recites the history of the case in which he removed 295 centimeters of the small intestines for gangrene. The patient recovered from this severe operation and manifested no functional symptoms as late as nine months after the procedure. There can be no definite rule laid down in the individual case as to the amount of intestine which it is possible to remove without incurring serious physiologic consequences; the size of the individual as well as other factors too numerous to mention have a bearing upon this matter. The serous fluid which the author found filling the abdominal cavity in his case he regards as non-inflammatory and compares it to that usually found in the sack of a hernia. Usually this fluid is to be regarded as possessed of antitoxic properties, the same to be accounted for as is done by Prof. Bier in his treatment of tuberculous joints.

Three Cases of Inguinal Hernia of the Cecum and Appendix in an Incomplete Sack.—BERARD and BIGNARD (*Gazette des Hopitaux*, July 10, 1902).—Here are reported three cases of this variety, the first of which was complicated by an acute inflammation of the appendix. It was not possible to replace the intestine at the primary operation, so a secondary one had to be performed for the radical cure of the hernia.

In the second case of this variety it was also impossible to make a complete dissection, although the appendix was not diseased. The patient incurred an acute pneumonia a few days after the procedure, but finally made a good recovery even in spite of this.

The third case was one of strangulated hernia. After relieving the cecum there was found the condition of diverticulum of the peritoneum containing neither omentum or intestine. In this patient there was a chronically inflamed appendix as well as cryptorchism. In spite of all these complications the wound was completely closed by first intention.

A New Protective Dressing.—SPRINGER (*Centralblatt fuer Chirurgie*, No. 24, 1902).—The very ingenious idea of the author is to substitute paraffine for rubber tissue as a covering for granulations, grafts and other sensitive structures which it is deemed wise to protect from the direct contact with gauze, etc. A small piece of paraffine is placed on the surface of water warm enough to melt it, whereupon it forms a thin film, which can be handled at will as soon as the water has cooled. The double advantage is apparent, that the material is cheap as well as sterile, provided the water is merely hot enough.

Why Should We Not Treat the Gall-Bladder as We Do the Appendix?—PARK (*American Medicine*, July 12, 1902).—Park describes the anatomic and functional resemblances between these two hollow organs, and upon this bases the conclusion which are implied in the title of the case. He speaks, further, of the auto-intoxication which results from a retention of the products or contents of either. He says, furthermore, that the accidents and the diseases of both are in a measure similar; further than this, the symptoms of the two are in a great measure the same. The derangements of the gall-bladder affect the stomach just as those of the appendix affect the cecum. Now, Park reasons that similar treatment applies to diseased conditions in both the gall-bladder and appendix, since the structure, functions, diseases and symptoms are so closely alike in the two instances. He rarely leaves behind a diseased gall-bladder when operating upon for any cause whatsoever. In closing, he describes the diseases of the gall-bladder with much wider limits, as far as operation is concerned, than has been the case with most surgeons hitherto.

Two Cases of Typhoid Perforation Treated by Laparotomy and Cured.—BAZY (*Bul. et Mem. de la Soc. de Chir. de Paris*, Tome xxviii, No. 2).—These two rather unusual operations were performed in two days, and both patients made excellent recoveries. In the first the treatment was inaugurated eight hours after the perforation; twenty minutes were required, the opening being found about fifteen cm. from the cecum. In number two, the perforation was twenty-five cm. from the cecum; this operation also required twenty minutes for its performance, but was done only six and one-half hours after the onset of the pain. This is distinctly a surgical triumph in two cases which must otherwise have almost certainly turned out fatally.

Gangrenous Intussusception in a Child Four Years Old; Intestinal Resection; Recovery.—DOWD (*Annals of Surgery*, July, 1902).—The most remarkable thing about the author's case is that the symptoms continued ten days before the surgical treatment was instituted. A gangrenous intussusception was found and the same excised, the intestine being joined end-to-end by a double row of silk sutures. The next day was marked by a spontaneous movement of the bowels, and in four weeks the child was up and well. The amount of physical depression in this case was surprisingly small, the patient being out of bed just before the operation and calling for indigestible food. The author is strongly in favor of a suture which passes through all the layers of the intestine, and adds evidence to the fact that even where reinforced by a second row no diaphragm is produced permanently.

Rupture of the Vena Cava Inferior in the Course of a Nephrectomy.—HOUZEL (*Bull. et Mem. de la Soc. de Chir. de Paris*, Tome xxviii, No. 18).—The case was one of pyonephrosis of about ten years' standing; the author had drained the tumor about one year previous to the date of the operation under discussion. After the sack had refilled it was decided to remove the mass, and after the ureter had been divided, upon the exercise of considerable tension, the pedicle torn partly through, but the bleeding was checked by the use of forceps. When it was seen that the injury was of the nature of a rent in the vena cava an attempt was made to suture the same. This proving unsuccessful, the vessel was ligated above and below the lesion, whereupon the patient made a good recovery. No distension of other veins showed wherein the compensation had consisted.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

Sugar as an Article of Diet for Dyspeptics.—W. G. MORGAN (*Archiv f. Verdauungskrankheiten*, 1902, p. 152).—In a series of careful experiments, Morgan has endeavored to ascertain the effect upon gastric digestion of quantities of sugar so large that they have usually been considered harmful. The observations were made upon four sorts of individuals: (1) A healthy day laborer; (2) two cases of hyperchlorhydria; (3) a case of gastritis chronica mucosa; (4) a case of achylia gastrica. The results were as follows:

1. The stomach contents of the healthy individual, after an Ewald meal, showed a total acidity of 50 with free HCl 40; when 90 g. cane sugar and 180 g. maple syrup were added to the breakfast, the total acidity fell to 25 and the free HCl to 12.5; 90 g. cornstarch pudding added to the test meal showed a total acidity of 32.5 with free HCl 5; 10.3 g. cane sugar, a total acidity of 30, free HCl 20; 10.3 g. sugar and 90 g. maple syrup, a total acidity of 25, free HCl 12.5. The patient, however, continued during the entire series to feel perfectly well.

2. Both cases of hyperchlorhydria showed similar results. In the first a total acidity of 115, free HCl 100, fell, upon the addition of 24 g. cane sugar and 90 g. maple syrup to his daily diet for ten days, to total acidity 60, free HCl 40. In the second, 20 g. cane sugar, three times daily for a week, reduced the total acidity from 65 to 40, and the free HCl from 52.5 to 20. Under this regimen their condition improved markedly, the appetite improved, ructus and pyrosis disappeared, as did also all gastric distress; their stools, which had been costive, became normal. When the sugar was left off again, all the disagreeable symptoms accompanying hyperchlorhydria reappeared. When they took brandy in addition to the sugar diet, the beneficial effects of the latter failed to appear.

3. The third group of experiments were made upon a diabetic whose urine contained four per cent. of sugar (109 g. daily) and whose stomach contents showed a total acidity of 20, no free HCl, much mucus. He was made to take, in addition to his regular diet, 60 g. of New Orleans molasses and 16 g. cane sugar with each meal. After a week the stomach contents, taken after an Ewald breakfast, not only an increase of total acidity to 35 with free HCl present, but a fall of the glycosuria to one per cent. (26 g. daily). Subjectively, too, the patient was much improved. A return to his former diet caused a return of his former distress and of the former hypoacidity; when the sugar was again added to his diet, the same improvement took place.

4. The case of achylia gastrica was practically unaffected by the sugar diet. For other incidental observations made in connection with these experiments, the reader must be referred to the original. It may be mentioned, however, that in all the observations the gastric peptonization of proteids was found to be hindered by the sugar; in the case of gastritis mucosa, the formation of mucin in the stomach was much diminished.

As regards the conclusions, the beneficial effect of a sugar diet is well-known, and has been confirmed by Strauss and others. Its action on gastritis chronica mucosa is of great interest, but requires further confirmation.

It is fair to add that this article, though published this year, was read before the American Gastro-Enterological Society in May, 1900. It seemed, however, of sufficient interest to warrant abstracting here.

The Place of Drugs in the Treatment of Stomach Troubles.—BOARDMAN REED (*Mobile Med. and Surg. Jour.*, 1902, No. 6, p. 349).—The place of drugs in the

treatment of many stomach troubles is in the drug store. This is true particularly of certain affections, such as some of the forms of nervous dyspepsia, and of gastralgia, which are frequently merely symptomatic of disease in the nerve centers or elsewhere. More hygienic habits and a more physiologic way of living, aided by a period of partial or complete rest, and, when necessary, by electricity, especially the galvanic or high tension faradic current intragastrically, light exercise, either active or passive or both, and by the judicious use of water internally and externally, will cure most cases of neurasthenia with very few or no drugs, whether the gastro-intestinal tract or other regions be prominently implicated.

The administration of alkalies is generally necessary in excessive secretion of the HCl of the gastric juice. When the bowels are not in need of a laxative, sodium bicarbonate in doses of from fifteen to sixty grains, given two hours after each meal, and in the worse cases combined for a week or two, at first with small or moderate doses of either belladonna or atropin, will usually be most useful. In many cases, especially where there is constipation, magnesia acts better than soda. When the hyperchlorhydria is due to a gastric ulcer, rest in bed with rectal feeding, followed by the gradual and careful administration of bland food by the mouth, will accomplish brilliant results. Massage of the abdomen is contraindicated not only in ulcer, but also in cases of hyperchlorhydria.

In the opposite condition of a deficient secretion of the gastric juice, especially of the HCl—such as obtains generally in old cases of chronic gastric catarrh of the atonic type—an entirely opposite line of treatment is necessary. In many of these cases nothing effects such prompt beneficial results as the administration of dilute HCl in doses of from five to thirty drops. Sometimes, however, even moderate doses produce a very disagreeable burning pain in oversensitive stomachs, and it is necessary, therefore, in these cases, to administer it a little at a time. The appropriate dose should be added to half a tumblerful of water, and taken in sips every few minutes during the hour following each meal. Massage of the abdomen and also exercises for the trunk muscles are now medicinal measures which help to restore the secretions of the gastric juice when the peptic glands have been impaired but not destroyed.

In atrophy, strychnin may be useful to assist in overcoming any coincident deficient motor power (which is an especially serious complication here), though gymnastics, massage, hydrotherapy, electricity, and especially intragastric faradism, will accomplish more.

For the graver forms of dilatation due to tumors in or near the pylorus, surgical intervention alone can be effective, though lavage with antiseptics may palliate for awhile.

In chronic atonic gastric catarrh, bismuth and carbolic acid will generally accomplish as much as any remedy, administered per os, but lavages every day or two with a combination of soda and common salt in the first wash water (a teaspoonful of each to the quart), followed by a weak solution of alum (grains thirty to the quart), silver nitrate (grains ten or fifteen to the quart), or other antiseptic astringent, can do still more in skilled hands; and the diet is all-important. These solutions for lavage should be followed by washing out with a pint, at least, of plain warm water; and in the case of the silver salt with a solution of sodium chloride.

In displacements of the stomach, unless the organ has been pulled down by a morbid growth, there is usually no need of surgery. Strychnin and diet will do something; abdominal supports, gymnastics, massage, electricity, and hydrotherapy can do very much.

Therapeutics of Chromium Sulphate.—LOUIS KOLPINSKI (*Therapeutic Monthly*, 1902, No. 6, p. 209).—The use of chromium compounds has hitherto been con-

finely nearly entirely to that of chromic acid as a caustic and antiseptic, and to the internal administration of potassium bichromate. The latter as well as the former is a violent irritant to mucous membranes, and the gastro-intestinal disorders following its use have made its administration almost obsolete. Believing that chromium possesses valuable therapeutic properties, the writer has used the green chromic sulphate— $\text{Cr}_2(\text{SO}_4)_2 + \text{H}_2\text{O}$ —in a considerable number and variety of diseases for a period of about four years. Chromic sulphate has an acid taste, a metallic after-taste. It dissolves slowly in water and in alcohol; in the quantities used for clinical purposes it shows no physiological effects on man in health. Its dose is from one to four grains t. i. d.

The most successful results were obtained in certain nervous disorders, such as functional impotence of young men, castration—menopause, nervous vomiting, neurasthenia, and so forth. A number of interesting cases are related illustrating the action of the drug.

It must, however, be remembered that the originator of a treatment is rarely able to exercise an objective judgment as regards its success. In none of the cases related by the writer can the effect of suggestion be disregarded. Nevertheless, the work already done warrants other clinicians in making further tests of the efficiency of this drug.

Quinine as an Antiseptic.—H. MARX (*Muench. Med. Wochenschr.*, 1902, No. 16).—As a result of his investigation of the influence of quinine on the growth of bacterial cultures, Marx found that quinine was an excellent antiseptic, being more active in this respect than either carbolic acid or formol. Applied to an infected wound, either in powder or in solution, it quickly arrests suppuration. It is moreover an efficient hemostatic. For this purpose it is well to mop the bleeding surface with a one per cent. solution, which may be put up as follows:

R Chinin. hydrochloric	5.0
Spirit. rectificat.....	15.0
Aq. dest	q. s. ad 500.0

Iodipin-Phosphor.—ROBERTS BARTHOLOW (*American Medicine*, July, 1902, p. 142).—Iodipin is a combination of iodine and oil of sesame. In commerce it appears in two strengths—ten per cent. and twenty per cent. It represents probably the most easily tolerated form in which iodine can be administered internally. Iodipin-phosphor contains one-fiftieth grain of phosphorus in ten minims of iodipin of twenty-five per cent. strength. It is a dark reddish-brown oily liquid, having an odor of garlic. It is best administered hypodermically, the dose for an adult being twenty minims.

It has been observed on the continent that the largest doses of iodipin do not cause iodism. This is explained by the character of the combination of the iodine and the sesame oil, whereby the former is given out so slowly that systemic effects do not appear. Nor has the writer seen any of the toxic symptoms due to the action of the phosphorus, although he has used as much as one-tenth of a grain repeatedly. Without any pronounced systemic action, iodipin-phosphor promotes in a marked degree the nutrition, increases the body weight, and removes or modifies the symptoms of various nervous affections not readily amenable to treatment. The cases thus favorably affected were examples of spinal sclerosis, anterior and posterior, neuralgia, neurasthenia, gout, chronic rheumatism, etc. It promises to be a valuable remedy in pulmonary tuberculosis and other wasting diseases. A fuller discussion of its physiologic and clinical aspects is promised in a future paper.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

The Microscopic Examination of Conjunctival Discharge.—EDGAR S. THOMSON (*Pediatrics*, July 1, 1902).—Thomson gives an account of the morphologic characteristics of the bacteria and pus cells commonly found in the conjunctival discharge. The bacteria found in this situation are the gonococcus of Neisser, the diplococcus intracellularis of meningitis (Neumann and Schaeffer), the Klebs-Loeffler bacillus of diphtheria, the bacillus of Weeks, and the staphylococcus in its various varieties. Other more uncommon bacteria found are the diplobacillus of Morax and Axenfeld, the xerosis bacillus of Colomiatti, the pneumobacillus of Friedlander, the streptococcus, the tubercle bacillus, the colon bacillus, and others. Thomson claims to get much valuable information from simple smear preparations without culture experiments. He states that the pus should always be taken from the cul-de-sac after the lower lid is everted. Pus from the edge of the lid should never be taken, as it is apt to be contaminated with extraneous bacteria. Smears should be gently made, so as to avoid destroying the relationship between bacteria and pus cells.

The varying elements found are the large pus cells with deeply stained, irregular, sometimes multiple nuclei, and faintly stained cell substance; sometimes we see a large squamous epithelial cell with a small round nucleus. Strings of mucus are also seen. The severer the discharge, the more pus cells do we find and the less mucus, but as the process subsides the mucus becomes more plentiful and the pus cells less.

He details the usual appearance of the gonococcus—biscuit-shape, etc. The bacillus of Weeks is the commonest bacterium found in the ordinary case of pink-eye. It is a short, thin bacillus, shorter and slightly thinner than the tubercle bacillus, and stains to nearly the same intensity as the pus cells, usually a very little deeper, but not so deep as the pus nuclei. It is, therefore, not as conspicuous as other more deeply staining bacteria, and the slide must be closely and carefully examined. It occurs between the pus cells and the strings of mucus.

In cases of doubt, of course cultures should be made.

The Tuberculin Test as a Possible Aid in the Diagnosis of Addison's Disease, with Report of Case.—ROBERT REULING (*Maryland Medical Journal*, July, 1902).—Taking advantage of the fact that Addison's disease is often associated with tubercular lesions, Reuling used the tuberculin test in a doubtful case of Addison's disease at the Johns Hopkins Hospital. The patient responded to the test, getting a marked rise in temperature and a local reaction at the point of injection. He advocates the use of this measure in suspected doubtful cases of this disease where there may be an associated tuberculosis. In this particular case there was no tuberculosis of the lungs, so far as the physical signs elicited from the chest and a microscopic examination of the sputum could reveal.

Most clinicians are agreed upon the point that tuberculosis is often met with in cases of Addison's disease. Lewin found in his analysis of 285 cases of Addison's disease that 211 were associated with tuberculosis of the suprarenal capsule.

[An admirable contribution to the pathologic anatomy of morbus Addisonii, showing the relationship between tuberculosis of the suprarenal capsule and this disease, is that of Rosenstein, in the *Pathologisch-Anatomischen Arbeiten*, from the Institute of Pathology in Posen. This writer showed in a number of cases of Addison's disease that the tuberculous affection of the suprarenal capsule was

undeniably the pathologic-anatomic foundation for the symptom-complex, as demonstrated by numerous necropsy findings.—ED.]

On the Cultivation of the Virus of Variola.—T. ISHIGAMI (*The Sei-I-Kwai Medical Journal*, Tokio, May 31, 1902).—Ishigami conducted a series of experiments with a number of protozoa found in variola lymph and its scabs, humanized vaccine virus, vaccine lymph, and the scabs of vaccinia. He found no bacteria in these situations which were characteristic. All inoculation experiments on calves with these different bacteria were negative. The protozoa found were green, shining, round or elliptic unicellular bodies possessing nuclei. In the younger stage they have ameboid movements and invade the epithelial cells, there becoming quiescent. They multiply in two ways—first, by division; and, secondly, by cyst formation, the contents of the cysts forming numerous sporozoites by a process of division. They therefore belong to the sporozoa. These sporozoa can be cultivated in a special artificial medium made with epithelial cells of a non-vaccinated animal. By inoculating this artificial culture into calves, we get vaccine vesicles accompanied by a fever, after a period of three or four days. These vesicles resemble ordinary vaccination vesicles. Calves inoculated with this artificial culture are completely immunized against the vaccine virus. By inoculating other calves with lymph from the vesicle produced by this culture, we can produce typical vaccine vesicles possessing protective power against variola. Ishigami therefore claims that these sporozoa produce variola.

What Shall we Teach the People in Regard to Tuberculosis?—GEORGE W. WEBSTER (*Medicine*, July, 1902).—Webster gives the essentials of a paper which he will send out to the inhabitants of the State of Illinois, teaching them some facts about tuberculosis. The writer is president of the State Board of Health of Illinois. These circulars will be sent to the newspapers as the educators of the public, to local boards of health, to teachers and principals of schools, to all physicians in the State, to families and friends of families where tuberculosis exists.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Quinine in Pregnancy Complicated With Malaria.—A. MAGGI (*La Clinica Ostetrica*, April, 1902; rev. *Jour. of Obst. Brit. Emp.*, July, 1902).—Twenty cases are recorded in which quinine was given freely for malaria in pregnant women without in any instance producing abortion. Maggi dwells on the dangers of not giving quinine in such cases; and he cites one instance in which fetal death and abortion at the sixth month of pregnancy occurred, presumably from the malaria, the medical attendant fearing to use quinine. In the cases in which quinine was given the infants were healthy and robust. The drug was administered by intramuscular injection in the form of the bichloride. Instead of producing abortion, the quinine in these cases prevents it, and also saves the patients from the cachexia and anemia of malaria.

A Case of Pregnancy Complicated by Pyonephrosis.—CHARLES GREENE CUMSTON (*N. Y. Med. Journal*, June 28, 1902).—The author describes the following instructive case: Patient, twenty-nine years old, multipara, was referred to the writer with the diagnosis of uterine tumor complicated by pregnancy. Upon

examination patient was found to be at the end of the fourth month of pregnancy. The right side of the abdomen was occupied by a tumor. Percussion dullness extended directly from the uterus to the growth, and above; the liver dullness continued directly with it. Ascites could not be proved. Examination of the urine revealed albumen and pus, but no casts could be detected. Catheterism of the ureters showed that the urine coming from the left kidney was perfectly normal, while that from the right contained all the pus, and a diagnosis of right pyonephrosis was made. By means of a long lumbar incision 1500 c.c. of thin, purulent fluid were evacuated. By deepening the incision another pocket was emptied containing 300 c.c. of thick pus. The cavities were irrigated and drained. The general condition of the patient remained fairly good for one week; temperature, 100.4; pulse, 90. Twelve days after operation, and five days after the drainage tubes had been removed the patient was taken with a chill, the temperature rising to 104, pulse to 135. The lumbar wound was reopened and 300 c.c. of putrid pus evacuated. The entire substance of the kidney was found destroyed by the formation of abscesses, and therefore extirpation of the organ was decided upon, and immediately performed. The subsequent course of the patient was very satisfactory. She was discharged well at the end of three weeks, and was delivered of a seven and one-half pound baby at full term without trouble.

The Annual Variation of Puerperal Fever Compared With that of Some Allied Diseases.—A. L. GALABIN (*Lancet*, June 14, 1902).—The author presents in two diagrams the annual variations, recorded for about ten years, of the following five diseases: Puerperal fever, erysipelas, general septicemia and pyemia, scarlet fever and acute rheumatism. Each of these diagrams contains, furthermore, a curve representing the annual rainfall in inches at Greenwich. There appears a distinct association of dry seasons with maximum mortalities of these five diseases. The meteorological character of the season may increase the prevalence of disease either by promoting the growth of pathogenic germs outside the body or by facilitating their diffusion or conveyance, most probably in the last mentioned way by aiding dissemination of microbes in the form of dust.

In order to test whether this effect of drought is immediate and direct the author has constructed a third diagram showing the weekly variations of the five diseases in London for the year 1893, in which four of them showed a high maximum of mortality. He concludes from this diagram that the excessive mortality of puerperal fever, erysipelas and rheumatic fever does not occur in the dry period, as is the case with scarlet fever, but from two to four weeks after a heavy rainfall.

The curve of mortality of puerperal fever, comprising ten years, shows a decided downward tendency, like that of the other four diseases. As regards the curve of erysipelas, its most marked feature is its close resemblance, almost amounting to identity, to the curve of puerperal fever.

The author concludes his article by drawing the following practical inferences: A further development of antiseptic midwifery is still required in England and Wales, outside of London. The relation of fatal puerperal fever to erysipelas is closer than has been generally supposed, and much closer than that of either disease to septicemia and pyemia generally. A consequence of this seems to be that an anti-streptococcal serum derived from erysipelas would be more likely to be useful in puerperal fever than one derived from any other source of streptococci except puerperal fever itself.

A Few Remarks on Menopause.—L. KLEINWAECHTER (*Zeitschr. fuer Geb. und Gyn.*, vol. xlvii, 1902).—In this elaborate paper the author deals with the pathology of the menopause, basing his deductions on a careful study of 373 women in the climacteric. Assuming that the normal age of menopause is between forty-

five and fifty years, he encountered premature climacterium in thirty-five per cent., delayed in eleven per cent. of his cases. As causes for premature cessation of menstruation the following conditions were found: Severe hemorrhages during labor, protracted lactation, puerperal fever, heredity, hyperinvolution of the uterus after confinement, uterus infantilis, operative procedures, such as manual removal of the placenta or curettment, chronic diseases without any direct connection with the genital apparatus, as chronic gastric or intestinal catarrh. Considerable space is given in this paper to a consideration of endometritis senilis, which, in the author's opinion, is a disease peculiar to the climacteric age. An exact knowledge of this form of endometritis is of great practical importance on account of the necessity of a differential diagnosis from carcinoma in the early stage. Among 739 patients in the climacteric stage, carcinoma of the uterus was found in forty-seven instances—*i. e.*, in 6.35 per cent. Striking is the fact that of 153 Christian patients, twenty-nine (=nineteen per cent.), while of 586 Jewish patients, only eighteen (=three per cent.), were suffering from carcinoma.

Furthermore, a less susceptibility of the Jewish race for carcinoma may be inferred from the following statistics: Taking all the gynecological patients, without regard to age, there were among 994 Christians sixty-four (= 6.53 per cent.) cases of carcinoma; among 5,987 Jews but thirty-eight (= 0.63 per cent.). The paper is concluded with a complete bibliography of the subject.

The Surgical Elevation and Conservation of the Prolapsed Ovary and Tube.—HENRY D. BEYEA (*American Medicine*, June 28, 1902).—The operation, invented by Saenger, consists in shortening the infundibulo-pelvic ligaments by means of sutures passed through the tubal and pelvic ends of these ligaments. The operation, in the opinion of the writer, is indicated in two classes of cases: first, that of simple prolapse of the ovary and its correlated tube to the retrouterine plica or into Douglas' cul-de-sac; and, second, those instances of more or less mild chronic inflammatory disease of the tube and ovary which have resulted in the same degree of prolapse, and in which the changes are not sufficiently extensive to demand extirpation of the organs. The second class of cases are more frequent. In these cases the operation is often done in combination with other conservative operations, as salpingostomy, resection of ovaries, etc. The practical results with the operation were in the hands of the author very satisfactory.

Cystopexy in Gynecology.—CHIAVENTONE (*Annales de Gynecologie et d'Obst.*, April and May, 1902).—The author describes a new operation for large cystocele. Pointing out the anatomical relations between the base of the urinary bladder, uterus and vagina, he emphasizes the fact that a cystocele is formed exclusively by the prolapse of the base of the bladder only, while both the anterior and posterior walls of the bladder remain in their normal position, but becoming stretched and relaxed. In order to restore the physiologic condition he operates as follows: The patient being in Trendelenburg's position, an abdominal incision is made in the median line. The uterus, grasped with a volsellum, is drawn upward. With a transverse incision across the vesico-vaginal excavation the peritoneum is divided and the two flaps separated by means of the fingers, from the anterior surface of the uterus on one side, and from the posterior wall of the bladder on the other. Then the base of the bladder is pushed off the uterus and vagina in the median line, and also slightly on both sides until the finger reaches a point where a further separation is impossible on account of dense connective tissue forming a barrier. This line of transition from loose connective tissue into dense tissue corresponds exactly to the interureteral ligament within the bladder, which, at a distance of about two cm. connects the ureteral openings. In case of considerable relaxation of the anterior vaginal wall, it can now be shortened by the formation of a few longitudinal or transverse folds, which are se-

cured with sutures. Then the wall of the bladder, a few mm. above the inter-ureteral ligament, is sewed with three sutures to the anterior surface of the uterus, one cm. above the internal os. The two flaps of the peritoneum, after being resected, are united by a continuous suture. Ventrofixation of the uterus and closure of the abdominal wall complete the operation.

In this manner Chiaventone has cured a case of an extremely large cystocele, in which, in his opinion, other simpler methods would have failed.

In an appendix of his article the author surveys all the operative methods for large cystoceles which are in vogue at present.

ORTHOPEDICS.

IN CHARGE OF

MALVERN B. CLOPTON, M. D.

Cases of Multiple Exostosis.—FORBES HAWK (*Presbyterian Hosp. Reports*, N. Y., Vol. v, 1902).—Two cases—brother and sister, æt. nine and fourteen years, respectively, with a negative family history, no lues or tuberculosis—showed multiple exostosis at the ends of the long bones and on some of the flat bones. The tumors in the boy had been noticed for four or five years, and selected heads of the humeri and ends of a radius and the phalanges and ribs near the epiphyseal lines. Besides several smaller nodules on the upper portion of the femora and rough tibiæ, there was an exostosis three by three inches arising from the lower end of the fibula, which together with mass the same size on the posterior superior angle of the scapula which were removed by operation. These did not recur, and were microscopically loose, spongy bone tissue. The girl had noticed growths on her ribs, femora, tibiæ and humeri for two years. These were all near the epiphyseal lines, and with the exception of one, one by three-fourths on inner side of upper end of humerus, where it pressed on the brachial plexus, had given no trouble. This growth and later a more rapidly growing mass on upper end of left tibia, which measured two by one and three-fourths by one and a half inches, were removed with no recurrence. They were similar to the growths on the boy.

While there was some evidence of old rickets in both children, the author suggests the name of ossifying chondromata to this condition, and believes it independent of rachitis.

Reconstruction of Finger-Tips by Sponge Eduction.—GEO. E. ABBOTT (*Amer. Med.*, July 26, 1902).—Two cases with illustrations show how one-fourth to one-half inch of the finger-tip can be replaced by inducing granulations into fine sponge meshes. The sponge graft should be one-sixteenth inch thick and be kept constantly moist with salt solution, and removed to be replaced with fresh sponge every third day. The results shown are good.

The General Management and Constitutional Treatment of Tuberculosis of Bones and Joints.—H. P. H. GALLOWAY (*Therap. Gazette*, July 15, 1902).—As the orthopedic surgeon's first duty is to realize that all tubercular hip, knee and ankle patients are primarily tubercular, the author gives his views for the management of these cases along lines now generally adopted by tubercular lung sanatoria. Rest, fixation, splints and jackets are as necessary as ever, but the environment can be vastly improved. Open air in winter, as well as summer, is essential. During the past year the writer has treated over three hundred patients in tents, and had the most marked and gratifying results not only in the

patients, but also in the attendants. The appetite improves immediately, the general health building rapidly and the local condition with it. The advantage of the tent is its cheapness, and the fact that in winter it is practically impossible to pollute the air, even if there is crowding of patients, on account of the porous structure and the great difference between the temperature indoors and out.

A Report of Two Cases of Typhoid Spine.—GEO. W. MOOREHOUSE (*Bost. Med. and Surg. Jour.*, July 17, 1902).—The cases followed typhoid which in one case was severe. In one case no symptoms were referable to the back while the patient was in bed with the fever, but was exceptionally weak in the back when he began to sit up. Ten days after his discharge from the hospital, the back began to pain, at first to throb and later became a dull ache. After a month of these indefinite symptoms his fever rose to 103° F., and continued for two weeks. The Widal reaction reappeared after having disappeared, and the spleen became enlarged. The leucocytes rose to 8500, but there was no typical relapse, the symptoms being referred entirely to the back. Examination of the spine showed no deformity or tenderness, only pain even when quiet. After thirteen months from the beginning of the typhoid, the back, while yet weak, was free from pain, and work was resumed. No mechanical appliances were used. The second case first showed symptoms with the spine when first propped up as convalescence was beginning. Deep-seated, cramp-like lumbar pains came in paroxysms. For ten days any movement of the spine started the pain; but while quiet in dorsal decubitus was free. After this afebrile attack subsided the patient had a second attack two weeks later, which continued for some months with occasional remissions, during the first month of which the fever would for several days at a time run as high as 104.7° F. There was no spinal deformity, and tenderness did not develop until later, when the paroxysms were so severe that it was feared there was a tubercular process in the bone. After a time, with rest in bed and occasional spinal extension, the symptoms gradually abated, and the patient recovered. The writer considers the trouble most likely to have been an inflammatory process in the vertebræ, their periosteum or cartilages. Deformity has been noted in six of the twenty-one cases reported in the literature. Fever has accompanied ten of the cases. In a very few cases has the trouble been of short duration, usually lasting for weeks or months, and liable to have repeated relapses, arising spontaneously or from the most trivial causes.

Subcutaneous Division of the Tendo-Achilles for the Relief of Equinus.—RUSSELL H. HIBBS, (*N. Y. Med. Jour.*, July 19, 1902).—Seventeen cases were studied to find whether or not the increased length of the tendo-achilles after tenotomy for the relief of equinus had any effect in modifying the function of the calf muscles. The results were obtained three to eight years after the operation. In the normal gait the calf muscles are effective in extending the foot from an angle of 85° to 110° . In eleven of the cases no force was felt in the calf after angle of 80° ; in four cases force could be felt at 90° , but not beyond; while in only three cases could the force be felt beyond a right angle. In the eleven cases the tendon was long and thin; in four cases elongated, but normal in size; while only in the three last cases was it normal in length and shape. In the eleven cases in which the function of the calf was seriously modified, there was marked retraction of the muscles. The gait in these cases was entirely without elasticity, "flail foot." The cause of the trouble was the elongating of the structures that filled in the gap when the patient began to walk. The modification of the function of the calf in these patients was the result of, first, the shortening of the muscles in the production of the deformity; second, the further shortening of the muscles subsequent to the tenotomy; and third, still further shortening of the muscles as a result of the lengthening of the structures connecting the ten-

otomized tendon. This serious modification of function of the calf must occur more frequently than now supposed, although this series is too small to draw definite conclusions.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

The Mental Diseases of Children.—DERCUM (*Philadelphia Medical Journal*, July 19 and 26, 1902) states that idiocy and imbecility are more common in childhood than insanity. Of the former he recognizes the following classes:

(1) Those with gross morphological changes, presenting in marked degree the stigmata of arrest and degeneration, such as microcephaly, anomalies of palate, teeth, tongue, etc.

(2) Those with gross pathological changes, producing hemiplegia, diplegia or hydrocephalus, destruction of large areas of cortical substance.

(3) Cretins.

(4) Amaurotic family idiots.

Of the insanities, the group of delirium, confusion and stupor occurs frequently in childhood. Delirium is exceedingly common in the acute infectious diseases; confusion and stupor are also frequently observed. This group does not differ in its manifestations from those as seen in adult life.

Melancholia, mania and paranoia occur very rarely in childhood, a fact which doubtless stands in relation to the undeveloped condition of the child-mind. Not infrequently, however, children present symptoms which are the forerunners of an insanity which is to develop later.

Neurasthenic insanities do doubtless occur in childhood, but they are far more rare than in the adult; they do not present such sharply defined or well-differentiated forms, and a marked neuropathic heredity is usually present.

The dementia of puberty (dementia precox of Kraepelin) is an affection of great interest and importance. It is essentially a dementia which begins insidiously and is usually progressive. Its course is usually characterized by two phases: the first of depression, the second of expansion or exaltation, with associated mental impairment. Various clinical types are recognized. Its most important etiological factor is heredity. In addition there may be the factor of auto-intoxication, the poison being elaborated by the ductless glands, perhaps, or by profound modification of the metabolism of the body. In addition the factor of nervous overstrain (to which children at this time of life are not infrequently subjected) may be a factor.

Paresis is exceedingly rare in childhood, hereditary syphilis being here the essential cause.

Hysterical and epileptic insanities, while they do occur in childhood, are very rare.

The Treatment of Acute Milk Poisoning; Summer Diarrhea.—T. S. WESTCOTT (*Philadelphia Med. Journal*, July 26, 1902) says that the treatment naturally falls into three divisions: (1) prophylactic, (2) dietetic, (3) medicinal.

Prophylaxis.—The cardinal principle is the use of pure cow's milk. The cows should be tuberculin-tested; the average percentage of fat, proteids and sugar should be fairly constant; there should be complete freedom from preservatives and coloring matters; there should be a minimum number of bacteria to the c.c., with complete absence of pathogenic varieties. In other words, certified milk should be used whenever possible. Pasteurization and sterilization

of milk in hot weather may be resorted to, but these processes cannot make wholesome a milk already unfit. The practice of heating the night-bottle and keeping it warm until the baby wakes for the feeding is strongly condemned. Experiments by the author showed that the bacteria in the milk multiplied enormously as a result of such a practice.

During the hot weather no milk should be used that has been kept over night from the supply of the day before.

In many cases it is of advantage to weaken the strength of the milk mixtures during the very hot weather. At the slightest sign of disturbance of stomach or bowels, milk feeding should be stopped and a dose of castor oil given, followed by broken doses of calomel.

Dietetic Treatment.—No cow's milk must be used. Albumen or barley water or acacia or rice water may be given. If otherwise indicated, small quantities of whisky or brandy may be added. Raw beef-juice may be used. Milk foods must be withheld until all signs of trouble are over, though later on in the disease the author allows the use of condensed milk. Return to milk-feeding should be gradual.

Medicinal Treatment.—After the initial purge with oil or calomel, or both, the author uses bismuth in various combinations. Opium he rarely finds necessary. Cardiac stimulants are used as indicated, though strychnia is avoided because of its action in stimulating peristalsis. Rectal irrigation with normal salt solution is recommended as routine treatment, and hypodermatoclysis with normal solution is used in cases of threatened collapse.

Intussusception.—HUBER and ERDMANN (*Archives of Pediatrics*, July, 1902), after reporting a case, give a review of the salient features of the condition. The principal symptoms are sudden abdominal pain, vomiting, the passage with much straining of a stool containing mucus, blood, and scanty liquid feces, and the presence of a tumor, though one or more of these symptoms may be missing. Of the three varieties, the enteric is the rarest; and here no tumor can be made out, as a rule. The colic form is less common than the ileo-cecal, which is the type most commonly seen.

The vomiting which usually sets in early is persistent, but fecal vomiting is rare in infancy. The character of the rectal discharge is important, and the presence of blood or bloody mucus resembling currant jelly is always suspicious, in the absence of a history of polyps or dysentery. Where a tumor cannot be felt by abdominal or rectal examination alone, conjoined manipulation may reveal its presence.

Two methods of treatment are advocated to-day: injection and operative interference. At present the tendency is to limit the employment of injections to the early stages, twelve to twenty-four hours from onset. They should be given without anesthesia. Baby placed on belly, hips elevated, warm water is then to be poured into the rectum without using too much pressure, the water to be held in the bowel by pressure on the anus from without. If this method is not successful the authors consider that surgical intervention should be had at once.

Erdmann considers that enemata should not be used at all in cases of over twelve hours' standing.

The operation is not difficult, excision of the gut being rarely required except in long-standing cases.

The proximal end of the gut should never be pulled in attempting the reduction, as this procedure is often productive of tears of the intestine. Reduction is to be produced by pressure upon the apex of the mass through the gut at the distal end. Should adhesions between entering and receiving gut prevent reduction, they may usually be broken down by the passing of a blunt instrument between the two portions.

Diphtheria and the Diphtheria Bacillus in Scarlet Fever, as the Result of Careful Investigation Extending Over Several Years, and a Study of the Literature.—SCHABAD (*Archiv fuer Kinderheilkunde*, vol. xxxiv, parts 3 and 4, pp. 161–216) arrives at the following conclusions:

1. Diphtheria may occur at the beginning, during, or in the convalescence from an attack of scarlet fever.

2. In order to make the diagnosis in the beginning of the attack of scarlet, the existence of the clinical symptoms of diphtheria as well as the presence of the bacilli must be demonstrated.

3. Klebs-Loeffler bacilli found in the throats of patients in the first stages of scarlet fever were not pathogenic for guinea-pigs.

If the diphtheria supervened later, the bacilli were pathogenic.

It does not follow, however, that the Klebs-Loeffler bacilli, found in the first stages of scarlet, do not add to the virulence of the scarlatinal process. In some cases diphtheria bacilli are found early in scarlet, without clinical symptoms of diphtheria. It is probable that in such cases the diphtheria bacilli act as saprophytes, and do not take active part in the pathological process.

4. Cases of scarlet fever, admitted to scarlet fever wards, should have the throat bacteriologically examined. If Klebs-Loeffler bacilli are present, these cases should be isolated from the older cases of scarlet.

5. In all cases where there is a combination of the two diseases, injections of diphtheria antitoxin should form part of the treatment.

Prophylaxis of Diphtheria by Preventive Injections of Antitoxin.—SEVESTRE (*Rev. Mens. des Mal. de l'Enf.*, June, 1902) concludes:

1. That preventive injections are of value in immunizing children exposed to the danger of diphtheria. They are never followed by bad results, and produce, at most, ephemeral skin eruptions; more rarely joint pains. Unfortunately, the period of immunization is short, not exceeding three or four weeks.

2. Injections are indicated in families where one member has contracted diphtheria, and in institutions where many children are congregated, where diphtheria has broken out.

3. Even in the absence of distinct cases of diphtheria in institutions, injections may be of value, for instance, in scarlet fever pavilions, etc.

4. The giving of injections does not imply the dispensing with other prophylactic measures (disinfection and isolation), but renders these easier and more efficacious.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

The Cause and Manner of Death in Epilepsy.—W. E. SPRAELING (*Medical News*, June 28, 1902).—This timely article has for its general thesis that an epileptic is always in danger of death, due to some manifestation of his disease. The manner and causes of death may be summarized as follows:

(1) It may occur suddenly in any case, as the result of a single seizure. (2) It may result from a series of seizures, occurring in rapid succession and ending in status epilepticus. (3) It may result from an accident suffered because of a fit. (4) It may result from all other causes that ordinarily produce it, with a seeming preponderance in favor of diseases of the heart and lungs. In a study of two hundred and twenty deaths from epilepsy the manner of death may be

approximataly stated as follows: Out of every one hundred epileptics who die, about four do so as the result of a single fit; about twenty-four as the result of status epilepticus; about twelve as the result of some accident, including suffocation in bed; about twenty-four as the result of some disease of the lungs, chiefly tuberculosis; about ten as the result of some organic disease of the heart, and about twenty-six from all other causes.

Etiology of Paresis.—ARTHUR W. HURD (*The Medical News*, May 17, 1902).—This paper is one in the recent symposium on paresis, in which some of the leading neurologists expressed their views on the mooted question of paretic dementia. The assigned number of causes which are of importance in paretic dementia have become narrowed down to acquired syphilis, alcoholism, mental stress and worry, heredity (including inherited syphilis), cerebral traumatism, sunstroke, and lead poisoning. Of these, by far the most important is syphilis. The statistics in favor of the syphilitic origin of paresis vary so widely that they are of comparatively little value. The author does not go so far as to subscribe to the dictum "No syphilis, no paresis." The following are the conclusions of the author:

- (1) Syphilis is the most common factor in the production of paresis.
- (2) It may cause it directly—an exciting cause.
- (3) It may cause it indirectly by bringing about such a devitalization of the system generally as to render other influences operative—a predisposing cause.
- (4) It is not usually the sole cause, but there is associated with it the deleterious effect of mental stress and overexcitement, dissipation and alcoholism, and heredity.
- (5) In a certain relatively small number of cases mental stress, worry or overwork may be the sole ascertainable cause.
- (6) Traumatism may also be the cause in a still smaller proportion of cases, but in many of them it acts as a developing or ripening agent of an incipient paresis in a syphilitic subject.

Fecal Vomiting in Status Epilepticus.—H. GOETZE (*Neurol. Centralblatt*, June 10, 1902).—This symptom was observed in a fifty-one-year-old woman who had suffered from epilepsy since the age of puberty. Following a series of epileptic attacks there developed a status epilepticus. During this the patient vomited several times masses of foul-smelling material containing particles of fecal matter. This phenomenon was repeated several times, chiefly in the status of a severe type lasting some time. In the status of a less violent sort it was not observed. In the free interval the patient had no symptoms pointing to any gastro-intestinal affection. No mention of this phenomenon was to be found in literature. The explanation is ventured that during the convulsion the muscles of the intestinal tract were involved in the spasm in precisely the same way as the other muscles of the body. By means of this spastic contraction of the bowel muscles an ileus resulted. To this condition the author has given the name of ileus spasticus.

Post-Typhoidal Ulnar Paralysis.—K. LIEPIET (*Berl. Klin. Woch.*, No. 27, 1902).—Isolated nerve paralyses following typhoid are of rare occurrence. The following case is, therefore, of some interest: In the convalescent stage of a severe typhoid in a man twenty years old, there developed a definite atrophy of the muscles of the little finger—the interossea and the adductor pollicis. These muscles showed the reaction of degeneration. Pain was present in the region supplied by the ulnar nerve. The condition cleared up after some months. In the literature sixteen cases of isolated ulnar paralysis following typhoid have been reported. The prognosis of such cases is uniformly good.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Study of the Geographical Distribution of Urinary Lithiasis.—SERGUIIEWSKY (*Ann. des Mal. des Organ Genito-Urin.*, March, April, May, June, 1902).—After giving much space to the resume and consideration of the data, statistics and opinions of the authors of all the countries of the five continents of the globe, the writer next takes up the various theories in explanation of the causation of urinary lithiasis, and discourses fully upon the influence of climate, geological conditions, potable waters, different beverages, alimentary regime, and, in general, hygiene, heredity, and the different social conditions and races of mankind.

There is no doubt that urinary lithiasis is very unequally distributed upon the face of the earth, but the statistics collected are not sufficiently complete and precise for one to indicate its degree of frequency in every country with a desired precision. Yet it is certain that we meet veritable epidemics of it at times. There is no theory which explains this unequal distribution; also there is no discoverable cause of the local epidemics, with the following exception: in Egypt, where calculi are developed around a parasite which penetrates into the bladder.

We recognize that the different races (in a liberal sense) play an important role in the occurrence of calculi, and that especially the social conditions play a very important part in the development of urinary lithiasis in children.

However, the study of the geographical distribution of urinary lithiasis reveals no specific cause as regards its etiology and pathogenesis; therefore it must be to the clinic and to pathological experimentation that we must look for its explanation.

Fixation of Movable Kidney by Means of Strong Carbolic Acid—Six Cases.—CARWARDINE (*The Lancet*, London, June 28, 1902).—The plan consists in freely painting the whole surface of the kidney, except the hilum, with the strongest liquid carbolic acid, so that the surface becomes covered with granulation tissue within a few days. The painting is best done after the supporting sutures, etc., have been inserted, but before they are tied, by means of a swab containing the liquid not in excess. In four of the cases—those in which the kidneys were suspended by gauze slings and packings—the author was able to watch the surface of the kidney for from ten days to three weeks, and observed the granulations and lymph rapidly formed, followed by intimate and firm incorporation of the kidney with the surrounding tissues. The acid seems to prevent, in addition, subsequent pyrexia and has no disadvantages. Six cases with good results are reported.

Hydatid Cyst of the Kidney.—HAYNES (*Annals Surgery*, July, 1902).—A large hydatid cyst, occupying quite the whole of the right kidney, was discovered by accident while operating for severe appendicitis. From what history of the patient that could be obtained it was inferred that the hydatid had caused no symptoms. The liver was hard, but not nodular. The patient died of pneumonia, and no post-mortem could be obtained. Upon microscopic examination hooklets were easily discernible, but there were no traces of kidney tissue.

Intra-Vesical Separation of the Urine from Both Kidneys.—HARTMANN (*Ann. des Mal. des Organ Genito-Urin.*, June, 1902).—Finding that Harris' instrument was not satisfactory, the author induced his assistant, Luys, to construct a more practical apparatus. With it he has made fifty segregations with satisfaction, and others obtain the same excellent results.

The principle of the apparatus is to place in contact with the inferior wall of the bladder a curved shank, in the curve of which is stretched a veil of rubber. We thus make a partition which separates the bladder into two parts, each corresponding to a ureter.

Essentially the instrument is composed of two metallic sounds paralleled, between which in a bed lie a chain which may be tightened or loosened by a mechanism in the handle. As the chain rises from the curve it carries with it a rubber partition. Each sound has a canal for the outflow of the urine from each ureter.

The instrument presents no difficulties for introduction into the bladder, and we may thus easily collect the urine separately from each ureter. It is then useless to have recourse to the delicate and sometimes dangerous manoeuvre of catheterizing the ureter to determine the functional value of each kidney.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

History of Eczema in the Last Century in England.—P. G. UNNA (*British Journal of Dermatology*, July, 1902).—This elaborate study is of interest to all, not merely from an historical point of view, but a practical one, as it brings forward a proper knowledge of the value of the term.

"It is difficult to imagine a time when eczema played no part in the diagnosis and treatment of skin diseases, and, in fact, did not even exist. And yet we need only go back a little more than a hundred years for this to be the case." With this opening remark, Dr. Unna goes on and discusses master after master in their order or time.

Willam, who has given us "the foundation to all dermatological knowledge," used the term to denote the vesication from serum and hydrargyria, always being produced by external influences. This teaching was continued until the time of Rayer, who was the first to add chronic eczema to the term or class.

It is to Rayer, Devergie, E. Wilson and McCall Anderson that we owe our present conception of the term, but it is "only by the progress of microscopical, bacteriological and chemical investigation hand in hand with the further clinical development of the eczema conception, of so great importance in dermatology, be possible."

The Fish Theory of Propagation of Leprosy.—A. S. ASHMEAD (*St. Louis Medical and Surgical Bulletin*, August, 1902).—In discussing the theory of Mr. Jonathan Hutchinson, that fish are a means of the propagation of leprosy, Dr. Ashmead makes the following rather pregnant and interesting remarks:

"Neither of these eminent leprologists think that fish operates in the transmission of leprosy as an intermediary host, as I do, but both of them think that it is by pure alimentation it propagates the disease.

"I have tried the inoculation of leper bacilli on fish flesh and failed. Koebner, of Berlin, also tried it on eels, and he failed. Nor is the bacillus ever found in fish when hunted for. Neither in Japan nor Hawaii, both scourged leper countries. The only reasonable fish theory of propagation of leprosy is one which takes into account the probability of a spore life of the leper bacillus, or a cysticeroid life. The spores of leper bacilli or their cysticerci might well inhabit fish flesh, which when eaten by man permits the creation of second being. This is the theory which I believe in, that is an intermediary host function of fish and mosquitoes.

"The mosquitoes, or perhaps another insect, sucks the blood of a leper, which, as we all know, does not contain the leper bacilli, but may contain its propagating property, although it dies in the horse, as was shown by Carrasquilla's fiasco. The dead mosquitoes or their larvæ in the water, are eaten by fishes, which in turn are eaten, either *living* or raw, by man, who thus becomes contaminated by something transmitted to him from the leper's blood. Even in direct transmission from man to man, it might be that it is not the original full-grown bacillus that is the propagating principle. However, that is another question. In the intermediary host function theory of fish as transmitters of leprosy there is a series of habitats of spore life of the bacillus to be studied before this matter can be satisfactorily learned; and that is exactly what is being done at the present time by the United States Fish Commission to Hawaii."

On Resorbin.—REINHOLD LEDERMANN (*Jour. Cutaneous and Genito-Urinary Diseases*, August, 1902).—Resorbin is a fat emulsion, consisting of almond oil, wax and water, combined by the addition of a minute quantity of gelatin, and a small amount of lanolin has been incorporated with it to improve its consistency and stability. This ointment being a fat emulsion, can be rubbed into the corneous layer and follicles without energetic massage, so that a slight residue or fat remains on the surface; therefore it is particularly applicable to the exposed parts, as the face or hands. The author recommends in these localities that the ointment be rubbed in and the excess wiped off with a dry rag.

From the large amount of water it contains the preparation acts as a cooling ointment, from the evaporation of the water, thereby relieves itching and allays inflammation. The marked softening of the superficial layers of the skin produced by resorbin shows that it is indicated, with or without the addition of other drugs in all affections in which it is desirable that the corneous layer be permeated with fat; that is, for the removal of crusts and scales in different skin diseases, such as pityriasis capitis and faciei, in crusting and squamous eczema, in impetigo, psoriasis and ichthyosis, also in all forms of dermatitis associated with rhagades.

Any of the numerous remedial agents ordinarily used in dermatology can be added to this base. It is especially to be recommended as a base for mercurial inunctions.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

The Relation of the Nose to the Reproductive Organs.—COX (*Brooklyn Medical Journal*, July, 1902), in a very interesting article, notes the relation which the nose bears to the reproductive organs, and cites several examples, viz.: The frequent occurrence of hemorrhage from the nose at the time of puberty and during early adolescence. The engorgement of the turbinates during the menstrual epoch, which may seriously embarrass nasal respiration, and that even in women who at all other times have unobstructed nostrils. The so-called "menstrual headache" is often due to a swollen middle turbinate pressing on the septum, and can be relieved by local applications to the congested turbinates. Nasal reflexes during sexual excitement, such as congestion and sneezing, are frequent. As an example of this the author cites the case of a man in whom the consummation of the sexual act always produced a severe fit of sneezing and occlusion of the nostrils. Two cases of severe priapism, each of several days' duration, are reported by Hobbs, which had completely resisted all kinds of

treatment, but which yielded promptly to the application of cocaine to the nasal turbinate bodies. In one case there was no intimation of a return; in the other, recurrence took place a few times, but only to a slight degree. Nasal disease is also frequently affected by menstruation, uterine or ovarian disorders, and the menopause. Trousseau noted the fact that the fetor of ozena is most pronounced during the menstrual period. It is also known that the fetor and crust formation are markedly mitigated after the menopause. The relief of painful menstruation by intra-nasal applications has been reported by Schiff, Fleis and others. Schiff proved that the pain of dysmenorrhea was relieved promptly in thirty-four out of thirty-seven cases by the application of twenty per cent. cocaine solution to the "genital spots" of the nose. Some cases he observed for months. Hypogastric pain was relieved by cocainizing the turbinate, and sacral pain by application to the tuberculum septi. Chrobak, in seventeen cases, cauterized the genital spots during the menstrual interval with trichloroacetic acid or electrolysis, with no return of the dysmenorrhea in twelve cases, one being under observation for two and a half years. This author also noted, in two cases, complaint of hypogastric pain immediately upon application of the cocaine plug. A lack of development of the erectile tissue of the nose has been noted in animals which had been castrated.

Hypertrophy of the Lymphoid Tissue at the Base of the Tongue as a Cause of Cough.—JARECKY (*The American Journal of the Medical Sciences*, July, 1902).—Coughs, especially reflex, are often very annoying to both the physician and the patient, and frequently baffle the former. The author calls attention to a rather frequent cause of cough, but one that is often overlooked, and that is a hypertrophied condition of the lymphoid tissue at the base of the tongue. The symptoms produced by this hypertrophy are a feeling of foreign body, fullness and tickling sensation in throat, desire to swallow and lastly the cough, which may be croupy, barking in nature or only a hacking cough with little or no expectoration. The application of a five per cent. cocaine solution to the base of the tongue will relieve the patient of his cough for a time, unless the epiglottis is buried in the masses of lymphoid tissue. A report of twelve cases is given. He found that the removal of masses of hypertrophied tissue is the best form of treatment and can be most easily accomplished with Myles' lingual tonsilotome.

The So-called Immunizing Treatment of Hay Fever.—INGALLS (*Medical Record*, July 19, 1902).—In a paper read before the American Laryngological Society at Boston, the author detailed some observations he had made in the treatment of hay fever with the fluid extracts of the pollen from golden rod and rag weed. The preparations were combined in equal proportions and given four times daily, beginning with two-minim doses and gradually increasing up to twenty. The patients were instructed to continue the remedy for a week or two and then stop it if there were no symptoms of hay fever. Twelve patients, or sixty-seven per cent., were relieved by the internal use of the preparation. In several instances the hay fever returned on stopping the medicine, but disappeared on resuming it. Thirteen believed they were benefited by using it in spray form; sixty per cent. of the cases were subject to asthma during the attack, and half of them were benefited or entirely relieved from the asthmatic symptoms. In two cases it caused disturbance of digestion, and in one it gave rise repeatedly to menorrhagia and had to be discontinued. About twenty-five per cent. of those benefited by this treatment attributed their hay fever to rag weed and none to golden rod. Owing to the fact that these preparations were seldom used in medicine, it is possible that they had been long in stock and of low efficiency. In the discussion that followed Dr. Hope said that the pollen theory of the origin of hay fever had received a severe set-back from the occasional occurrence of cases of perennial congestive activity of the nose.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

The Various Causes of Obstruction in the Central Artery of the Retina.—A. H. THOMPSON (*Ophthalm. Review*, March and April, 1902).—The ophthalmoscopic picture of cases usually diagnosticated as "Embolism of the Central Artery of the Retina" does not differ widely from the appearances noted first by von Graefe in 1859. The typical features include a pallid disk, attenuated vessels (with occasional irregular to-and-fro movements of the blood column in the veins), central haziness of the retina, the macula itself occupied by a cherry-red spot and surrounded by delicate greyish-white stippling. Subjectively, there is sudden partial or total loss of vision.

The possibility of other conditions giving rise to arterial obstruction and hence producing appearances indistinguishable from those evoked by embolism has been asserted by various observers. In this interesting paper Thompson gives a critical review of some of the pathologic incidents which, theoretically, might originate the ophthalmoscopic picture.

1. *Embolism*.—The free anastomosis of the ophthalmic artery with the external carotid and the facial would preclude the possibility of a plug situated in the former retarding even momentarily the retinal circulation; therefore, if the cause be actually an embolus, it can only be situated in the central artery of the retina or in one of its branches. Three objections to this theory have been advanced: 1. Shortly after the onset of blindness there is still a small amount of blood circulating in the retinal vessels. 2. No trustworthy ophthalmoscopic observation of the actual thrombus has ever been recorded. 3. Microscopic examinations have merely shown conditions which might have been produced by an old embolus or thrombus or by a proliferation of the vessel wall.

2. *Hemorrhage into the Optic Nerve Sheath* was diagnosticated by Magnus in a case of sudden blindness with the ophthalmoscopic picture of embolus, where subsequently there occurred a partial restoration of function in the nasal half of the retina.

3. *Primary Thrombosis*.—This diagnosis was first proposed by Priestley Smith in 1884. It is difficult to imagine any pathologic condition of the blood producing a clot in the absence of lesion of the intima, and it is extremely doubtful whether such lesion ever does occur in arteries as small as the retinal artery. Intravascular clotting may be induced experimentally by the injection of certain proteid-like substances into the circulation, but the coagulum is always formed within the veins. Inasmuch as there is no unimpeachable instance of primary thrombosis of the retinal vein, we are all the more justified in rejecting the notion of a primary thrombosis of the retinal artery.

4. *Spasm of the Muscular Walls of the Artery*.—If the retina is deprived of its blood supply for even a few minutes, it suffers irreparable injury. Thus, spasm of the retinal artery might, theoretically, cause permanent blindness. Such an occurrence would find an analogue in the arterial spasm in connection with Raynaud's disease. Actual spasm of the branches of the retinal artery has been observed by Wagenmann in a case having attacks of transient blindness, the blindness later becoming permanent.

5. *Disease of the Arterial Walls*.—Swelling of the intima, thus permitting approximation of the vessel walls under conditions of low blood pressure, might suffice to deprive the retina of blood long enough to destroy its function. Such swelling has actually been demonstrated in the retinal artery. Whether the condition can be regarded as a true "Endarteritis Proliferans" is still *sub judice*.

The writer suggests that in addition to the customary examination of the heart and the testing of the urine for albumin, cases under discussion should be questioned as to prodromal attacks of transient blindness and as to any conditions which might conceivably give rise to reflex arterial spasm. Conditions favoring thrombosis (anemia, pregnancy) and endarteritis (syphilis) should be noted.

The Value of Trikresol as an Antiseptic in Ophthalmic Practice.—E. JACKSON (*Ophthalm. Review*, June, 1902).—In 1894 de Schweinitz recommended an aqueous solution of trikresol 1:1000 as a basis for collyria. He found that such solutions placed in loosely-corked bottles and exposed to the air remained free from bacterial contamination.

Jackson's experience with this solution has convinced him that it constitutes a more nearly ideal antiseptic than any yet tried in ophthalmic practice. Applied to the conjunctiva it causes only a momentary sensation of burning, comparable to the transient smarting induced by simple solutions of eserine or cocaine. He has used it with entire satisfaction as a basis for solutions of cocaine, eserine and most of the mydriatics. As an antiseptic wash it is superior to boric acid, which, as is well known, readily becomes contaminated with low vegetable forms. Its advantages in this connection are summed up as follows: 1. It is free from risk of making the eye worse in any respect. 2. It is an antiseptic solution that will at least keep itself clean. 3. It has a distinctly germicidal influence when used to wash out the conjunctiva.

A Case of Naphthalin-Cataract.—A. LEZENIUS (*Klin. Monatsbl. fuer Augenheilk.*, February, 1902).—Opacification of the lens has been induced experimentally in animals by feeding them with a paste composed of naphthalin and glycerine (Panaz, 1887). Shortly after ingestion the vitreous became cloudy and was found to contain crystals of various salts of calcium, which later appeared in the retina as greyish plaques with irregular borders. The optic disk was notably swollen. At the end of the third week the first sign of lenticular change appeared in an opacification beginning around the nucleus. A week or so later the entire lens had become clouded. In the meantime the animals had grown thin and the urine showed crystals of calcium salts.

It is well known that the exhibition of full doses of naphthalin is occasionally followed by symptoms of irritation of the uro-genital tract, such as swelling of the meatus, itching of the urethra, strangury, and vesical tenesmus. There may also be digestive derangement, manifested by nausea and vomiting.

The case reported took 5.0 gms. naphthalin (which was later found to be an impure preparation) in the course of thirteen hours. The following morning the patient awoke with a severe pain in the bladder and "blind." On examination vision was found reduced to "fingers at 1.5 metre." The fields for white and color were concentrically narrowed. The lens showed superficial and deep distinctly outlined white opacities, between which there obtained a diffuse greyish clouding. 0.5 mm. of the periphery of the lens was entirely transparent, thus giving the appearance of a zonular cataract. The fundus was imperfectly seen, but narrowing of the vessels and blanching of the papilla in the temporal half could be made out.

In an extended analysis of the case the writer concludes that the lens changes cannot justly be ascribed to the impurities in the preparation, inasmuch as the perfectly pure drug produced precisely the same changes in animals. The diagnosis is strengthened by the positive exclusion of nephritis, diabetes and rachitis, and by the presence of the characteristic vesical symptoms.

BOOK REVIEWS.

UEBER DIE BEDEUTUNG DER FUNCTIONELLEN NERVENKRANKHEITEN FUEER DIE DIAGNOSTIK UND THERAPIE IN DER GYNAEKOLOGIE. Von PROFESSOR DR. B. KROENIG, Leipzig. Verlag von GEORG THIEME. 1902. G. E. Stechert, New York, agent. Price, 60 cents.

For many years the relation between nervous diseases in the female and the sexual organs has occupied a rather prominent position in the interest of the profession. An explanation for the deplorable fact that this question is still far from being satisfactorily settled may be ascribed to two reasons: First, the neurologists who have approached the question have not been thoroughly competent gynecologists; second, the gynecologists who have tried to solve this problem have not properly regarded the complete change of opinion which of late has taken place with reference to the nature of the so-called functional nervous diseases, especially hysteria and neurasthenia. More and more may we observe how a certain familiarity with the work of the neurologist is appreciated by the modern gynecologist. The book before us, written by a man who ranks high among the best of German gynecologists, will undoubtedly greatly advance a general knowledge of the relationship between diseases of the nervous system and the sexual apparatus in the female. The author deals in this volume in a very clear and satisfactory manner with the origin of nervous diseases consecutive to abnormalities in the genital organs, with secondary changes in the sexual sphere produced by primary diseases of the nervous system, and with the treatment of these conditions. The reviewer, although he cannot agree with the writer in all points, is ready to acknowledge that the author's views are both interesting and instructive. This volume is strongly recommended not only to the gynecologist, but to every physician who has to care for female patients.

MANUAL OF ANTENATAL PATHOLOGY AND HYGIENE. By J. W. BALLANTYNE, M. D., F. R. C. P. E., F. R. S. Edinburgh, Lecturer on Midwifery and Gynecology, Medical College for Women, Edinburgh; Lecturer on Antenatal Pathology and Teratology in the University of Edinburgh. William Green & Sons, Publishers. 1902.

Economic, scientific, sentimental, practical and political are the causes which have gradually invoked attention to matters of antenatal interest. Preventive medicine, which occupies so conspicuous a position in modern science, will not have attained to its highest development until it has solved the problem of antenatal prevention of disease. A literature has grown up around morbid heredity, antenatal pathology, antenatal diagnosis of fetal diseases, and hygiene of the fetus, to which the author of this book has made more original contributions than any other investigator. It would seem a hopeless task to outline here the contents of a book which contains some new, original, striking thought on almost every page. It comprises all that the author himself has contributed to the subject; it surveys carefully the work of all the other investigators, and indicates all the points which need further study in order to make perfect our knowledge of this still dark field of medical science.

The present volume deals with antenatal pathology in its relation to post-natal and neonatal pathology, and with the pathology and hygiene of the fetus. A second volume, promised by the author, will be devoted to teratology. This book, which justly may be regarded as a classic, will appeal to every one who is interested in scientific research of a high order.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS. Volume V. Obstetrics. Edited by REUBEN PETERSON, A. B., M. D., and HENRY F. LEWIS, A. B., M. D. April, 1902. Price of this volume, \$1.25; price of the series, \$7.50.

The present volume, one of a series of ten, issued at monthly intervals, covers the field of obstetrics. The editors have selected for abstracting from the world's literature such articles as, in their opinion, best exemplify the thought of the period. In some instances they have inserted personal remarks in brackets. We heartily recommend this series to the general practitioner who wants to keep in touch with the progress in the various branches of medical science.

A PHYSICIAN'S PRACTICAL GYNECOLOGY. By W. O. HENRY, M. D., Omaha, Nebraska, Professor of Gynecology in the Creighton Medical College. With five full-page illustrations and sixty-one illustrations in the text. Lincoln, Nebraska. 1902.

This little volume presents within the small limit of 226 pages the essentials of gynecology in a brief, concise, and very clear manner. The whole arrangement of the matter is happy and well adapted to the needs of the student. The treatment taught is up-to-date. We consider this book one of the most satisfactory treatises of this size on gynecology.

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ORIGINAL ARTICLES.

THE ETIOLOGY OF PROSTATIC HYPERTROPHY.

BY G. FRANK LYDSTON, M. D., of Chicago.

The etiology of enlargement of the prostate is, at best, unsettled. Opinions vary, from the assertion that no cause is discoverable to views the most dogmatic. Most modern theories are as impeachable as the old-time views. Home, more than eighty years ago, held that the principal cause of prostatic hypertrophy was a slow return of blood from the vesical neck, due to the disadvantageous situation of the prostatic plexus in its relation to the heart, favoring habitual congestion. He believed that this congestion was enhanced by high living, or anything determining an excess of blood to this region, and that traumatism, as in horseback riding, sometimes produced a rupture of the blood vessels, analogous to apoplexy, in the deeper parts of the prostate, this being followed by hypertrophy. A prominent etiologic rôle was assigned to old age.

As respects the etiologic importance of congestion, Home was perhaps not far wrong.

Wilson, in 1821, agreed with Home as to the tendency to the disease in high livers. He believed that celibacy, on the one hand, and venereal excesses, on the other, were of etiologic importance, although it exceptionally occurred in the abstemious and temperate.

Sir Charles Bell believed in a predisposition to prostatic enlargement, without defining it. Accepting such predisposition, he gave as an exciting cause irritation, with frequent contractions of the bladder. These contractions, he claimed, caused overaction of the urethral muscles, which drew the so-called median lobe backward so as to elevate it and constitute a urinary obstruction.

Samuel Cooper frankly confessed his ignorance of the causes of prostatic hypertrophy. He believed, however, that people who led sedentary lives were especially liable to it.

Brodie accepted enlarged prostate as a matter of course in old men, because it never appeared until marked senility developed. This is a type of the erroneous view then and now held by the laity and the majority of the profession.

The elder Gross claimed that prostatic hypertrophy was due to habitual engorgement of the organ, due to excessive coitus, calculous irritation, stimulating diuretics, alcoholic or malt liquors, exposure to cold, the suppression of cutaneous diseases, gout and rheumatism, trauma, frequent catheterism, and habitual straining at stool, as in chronic diarrhea.

Astley Cooper asserted that enlargement of the prostate was invariably the consequence of age, not of disease.

Mercier classed as predisposing causes all conditions and influences favoring sluggishness of the circulation. Men of lymphatic habit, with abundant cellular and adipose tissue, have generally a lax and atonic venous system. Such subjects, he claimed, were most frequently prostatiques—especially when of sedentary habits.

Amussat claimed that syphilis, a foreign body in the bladder, or urethral stricture were common causes. It is observed, he claimed, chiefly in elderly persons who have for a long time used sounds or bougies.

Desault held that it was common in elderly men, and in those who had had numerous attacks of gonorrhea. He also believed it bore an effect in relation to scrofula and other cachexie.

Civiale placed first, as a cause, vesical calculus. Next in frequency was stricture. He denied the importance of venereal excess.

Coulson merely presents the opinions of others.

Thompson long ago expressed himself unequivocally as believing that chronic prostatic enlargement occurs in young patients. The organ in such cases enlarges by interstitial plastic inflammatory exudate; while in old age there is unnatural development of the prostatic tissue proper—*i. e.*, a true hypertrophy. He says that inflammation does not favor growth, but is directly antagonistic to it. A prostate, therefore, enlarged by inflammation is not likely subsequently to hypertrophy. Nutrition is impeded, not encouraged. In brief, Thompson, unwarrantably, I think, excludes inflammation from the etiology. Urethral stricture and calculus he does not consider important etiologically. He does not believe that habitual prostatic and hemorrhoidal congestion is especially causative. True hypertrophy, he claims, is never caused by venous congestion, which impairs structure and predisposes to ulceration, but never enhances vital force. This may be true enough, but loses weight in view of the fact that prostatic hypertrophy is a misnomer. He disputes the etiologic possibility of rheumatism, gout and syphilis. Regarding sexual excess, he says: "Much influence has been attributed to habitual sexual indulgence; but, as the affection occurs in chaste individuals, continence also has been accused. As to the first, repeated use might be expected to induce hypertrophy here as elsewhere, for, without discussing the prostatic function, we must associate the organ with the sexual act. It is thus difficult not to attribute hypertrophy to sexual excess. Facts, however, contradict this view. Hypertrophy is absent when the function is most vigorous, and does not develop from licentiousness during the prime of life, and it must be admitted that elsewhere hypertrophy develops coincidently with, or immediately follows, increased action." Thompson denies that the prostate is a secreting gland, but admits it for the sake of argument, and claims that no other gland is a pathologic parallel of prostatic hypertrophy, as all of its component tissues are not increased in their relative proportions. The enlargement may be due to increase of glandular elements; or to an increase of either the connective structure or prostatic muscular tissue. Thompson maintains that enlargement of the prostate is not a simple muscular hypertrophy from overaction. He mentions the similarity of the uterus and prostate, and thinks that, just as during the decline of reproductive activity the uterus is prone to develop new growths identical in structure with its own, a similar tendency exists in the

prostate at a corresponding period. Thompson's tables apparently support his view that prostatic hypertrophy is a disease of old age, but do not make clear the connection between it and senility. Granting that old age is the chief etiologic factor, much is unaccounted for. Why should so many old men have a distinctly pathologic condition of an organ which, in old age, is practically unimportant, physiologically or functionally? Thompson himself admits that hypertrophy is not necessarily, or even usually, present in old age, but is rather exceptional. According to him, a slight hypertrophy, undetermined during life, may exist in one in three men after sixty, and marked enlargement may be met with in one out of seven or eight after that age.

The modern French school, following Guyon, holds that prostatic enlargement is not a local condition, and that all the urinary organs, particularly the bladder, undergo changes of analogous character, the origin of which is in structures bearing absolutely no anatomic relation to the urinary system; implying, in short, that enlargement of the prostate is due to general atheroma. This school claims that the vesical walls lose tone, with consequent accumulation of residual urine and cystitis prior to prostatic enlargement. Reginald Harrison asserts that partial retention frequently precedes the vesical signs of prostatic enlargement, the depression of the posterior wall of the bladder being primary. This depression results in compensatory hypertrophy, with the development of a strong muscular buttress at the base of the trigone, and finally enlargement of the prostate itself.

Even though depression of the floor and alteration of the walls of the bladder may, in certain cases precede perceptible prostatic change, I contend this is no argument against the view that pouching of the bladder is a secondary condition in most instances. General atheroma, for example, with resulting alteration of vesical structure and tone, might occur and subsequently become associated with enlargement of the prostate, which enlargement is due to the same causes as in other cases in which prostatic hypertrophy is unassociated, primarily, at least, with vesical disease. That general atheroma is sometimes the cause of prostatic disease, I feel assured. Fatty degeneration of the bladder, however, is, to my mind, a much more important factor in primary pouching. This I have verified by numerous dissections. I have found fatty bladder chiefly in alcoholics. In several cases the prostate was also markedly fatty.

Taking for our point of departure the modern and rational view that all pathology is but perverted physiology, it is necessary to inquire into the structure and function of the prostate, in our endeavor to determine the causes of that omnibus pathologic condition termed prostatic hypertrophy.

The etiologic views which I will present are, with certain modifications, the same as I have previously published from time to time.

The old nomenclature of the prostate, which implied its glandular structure and function, has been assailed by some modern authorities upon genito-urinary disease, and there has been considerable discussion of the question as to whether its function is purely muscular, or its muscular action secondary, or, better, auxiliary to its glandular function. The best and most logical description of the prostate is found in the lectures of Mansell Moullin. He premises his discussion by stating that the prostate acts neither as a sphincter nor as a muscular buttress. It does not assist in the discharge of urine, nor delay its exit. It is merely a sexual structure surrounding the first portion of the urethra, with a

distinctly sexual function. The *pars prostatica*, surrounded by the prostate, belongs anatomically to the bladder, which is not only continuous with it, but is developed in common with it from the allantois. They are independent of the rest of the genito-urinary way. In the monotremes the penile and prostatic portions of the urethra never become organically joined, the penile portion being a sexual organ and independent of the urinary function. In man a somewhat similar condition is seen in so-called hermaphroditism, where the urethra opens perineally. In my own dissections I have proven Moullin's assertion that a vertical section of the prostate just below the vesical neck in an infant shows the relation of the prostate to the urethra in an unmistakable fashion. The urethra lies in the center, or a little anteriorly, with a few longitudinal non-striated muscular fasciculi around it. External to these is a very thin layer of circular fibers, some of which seem muscular. This is probably part of the circular coat of the bladder. The prostate itself forms two great bilateral masses, chiefly composed of ducts, with indications of acini at their ends, converging toward the central canal. Anteriorly, they are connected by inosculating fibers with large nuclei spreading from the great transverse isthmus of stroma stretching across the urethra. The prostate, in brief, surrounds and supports the urethra, but forms no part of it. The canal traverses its middle and the glandular tissue is simply massed around it.

My dissections especially confirm this latter statement of Moullin's. The relation of the urethra to the prostate is such as might result from drawing the mucous membrane of the bladder down through a tunnel in the prostate and attaching it firmly.

The sexual character of the prostatic glandular tissue is certain. It can have nothing to do with micturition. The glands do not fully develop until adolescence. In castrated animals they atrophy, and, like the other sexual organs in many animals, their size and perfection of structure rise and fall according to the breeding season.

The stroma of the gland—the fibrous and muscular tissue surrounding the *pars prostatica*—is held by many to be the real seat of hypertrophy in old age. Whatever may hold pathologically, the gland stroma is purely sexual, and has nothing to do with micturition, so long as the structure is normal. That it has no urinary function is shown by its absence in women and children, who get along very well without it.

As Moullin says, what has been said regarding the structure and function of the prostate is true only of the normal organ. Any alteration in shape, size or consistence distinctly modifies its relation to both the urinary and sexual functions.

It would appear, then, that the prostate is practically a gland, the function of which is purely sexual. The glandular elements are cemented by connective tissue stroma, reinforced and protected by muscular and fibrous tissue, varying in amount according to the degree of pathologic change in the gland. Either inhibition or exaggeration of function may result in stromal change.

It must be admitted that in seeking for the etiologic factors in prostatic pathology we must take the normal structure and function as our basis. This is especially necessary in considering chronic pathologic processes where there has been no traumatism or infection. If the organ is sexual, it is to the sexual function that we must look for the *causa prima*. If the function of the prostate

be glandulo-sexual, it is toward its function as a sexual gland that we must refer in explaining its pathology. If the prostate acts normally in any way as a muscle, we must consider also perturbations of its muscular action in studying the etiology of prostatic enlargement.

I have never been able to understand how enlargement of the prostate could be attributed to senility. This theory seems especially untenable if we accept the prostate as a sexual gland, the activity of which should decrease with advancing age, with a resulting atrophy, if anything, rather than hypertrophy. Moullin says: "Enlargement of the prostate is at its commencement a diffuse glandular growth, spreading chiefly in the mucous and submucous tissues and later becoming modified by secondary changes, failure in expulsive power of the bladder being in almost every instance the direct consequence of it. Age alone, though it may not be without influence, is not the cause, for two reasons, either of which is sufficient. Prostatic overgrowth is absent in the majority of old men, and its degree bears no relation to the age they reach; and in the second place it occurs, more frequently than is usually believed, in men who should not be called old either as to years or sexual power. The age when it first appears must not be confounded with the age at which residual urine is discovered. The growth may exist for years before causing residuum, and the freedom from enlargement when the gland is explored rectally is worthless as regards extension in other directions. If vertical antero-posterior sections are made through the vesical neck, and the urethra, after hardening, with as little disturbance as possible—and this is the only fair test for the vesical form of overgrowth; rectal measurements, the weight of the removed gland and the external dimensions, giving very little information as to the shape of the gland, and none at all as to its consistence—we quite often find considerable increase long before anything which can be justly called old age."

Moullin presents a number of cases from twenty-seven to fifty-four years of age.

Moullin's observations regarding the frequent occurrence of hypertrophy in comparatively early life especially interested me, according, as they did, with my own. For many years I have observed that a large proportion of comparatively young individuals under observation for various genito-urinary affections, not necessarily prostatic, and who have not recently suffered from definite inflammation of the organ, present more or less fullness of the prostate of varying hardness when examined per rectum. I have found this condition in masturbators and in individuals who have had at a remote period inflammation in and about the prostate and vesical neck. I often find it where there are no distinct prostatic symptoms. It seems to me improbable that all such cases can go through life without prostatic hyperplasia, with resulting sclerosis or glandulo-fibrous overgrowth.

For many years I have regarded the relation of old age to hypertrophy of the prostate as secondary, believing that the primal point of departure is really pathologic conditions incidental to abuse of the sexual function or to acute or subacute, inflammatory or congestive processes of the organ during early life, whether infective or not. Old age, in my opinion, bears the same relation to enlarged prostate as it does to certain joint troubles developing late in life as a consequence of some long-forgotten pathologic condition or injury occurring at an earlier period. Considering the distinctly sexual function of the prostate, an

exaggeration of the secretory activity of the gland and the muscular action incidental to expulsion of semen during the earlier years of life may logically be assumed to constitute the point of departure for prostatic hypertrophy later on, especially if the gland become the seat of infection and inflammation. Increasing experience confirms me in the foregoing views. I have numerous cases of old and middle-aged men under my observation at the present time whom I have seen from time to time for nearly twenty years and who are suffering from prostatic disturbance and enlargement of greater or less degree, which has been more or less continuous during the time that they have been under my observation, and who present histories of sexual excesses or deep-seated gonorrhea, or both in combination, in some instances, with dietetic and alcoholic excesses. I have performed prostatectomy in a number of such cases.

I had under my care several years ago a physician of forty-five years of age who had a distinctly enlarged prostate, a moderate amount of residual urine and a considerable vesical disturbance, whose own observations and opinion of his case coincided with my own on the point just made.

I recall a number of laymen from forty-five to sixty years of age who have acknowledged sexual excesses, and stated that they have had vesical and prostatic trouble more or less continuously following gonorrheal prostatitis many years before. I could present a sufficient number of cases to alone make quite a comprehensive paper.

I believe that the term prostatic overstrain embraces the etiology of a large proportion of cases of prostatic enlargement, cases involving widely variant pathologic states. Just as the structures of a joint strained during early life may become thickened with advancing age without there being necessarily evidences of disease elsewhere, so may the prostate show early in life the results of abuses inflicted in youth or early manhood. This is almost inevitable if the organ has ever been inflamed. It is admitted that enlargement of the prostate occurs in men who have been continent or who at least have never had gonorrhea and have led temperate lives. It may occur, for example, in the honest farmer, surrounded all his life by an environment favorable to physical perfection. But evils other than sexual excess, infection and intemperance deserve attention. While not so frequently a masturbator as is the city boy, the country lad does very often acquire the habit, and is much more likely to suffer from suppressed desire than the urban young man. Continence should imply not only physio-sexual continence, but psycho-sexual continence and abstinence from masturbation. If it be granted that masturbation often produces congestion and hyperesthesia of the prostate and prostatic urethra, and if, moreover, it be admitted that the function of a glandular or muscular organ cannot be long abused without permanent morbid results, the probable importance of masturbation in the etiology of prostatic hypertrophy is clear. If this be admitted, and the large proportion of boys addicted to it be considered, masturbation as an etiologic factor assumes importance.

Can disturbance of micturition *per se* eventually produce enlargement of the prostate? I should answer affirmatively, the irritation acting in precisely the same manner as does prostatic overstrain from sexual excess. Irritation of the *pars prostatica* and *membranosa* produces frequent and spasmodic micturition, with coincident disturbance of the circulation of the prostate, a condition similar to that prevailing during sexual excitement and ejaculation. The relation of ir-

ritation of the deep urethra to prostatic hyperemia is well shown by the salutary effect of the posterior urethral application of nitrate of silver in such cases. Such applications certainly have no effect upon the prostate *per se*. It is questionable, indeed, whether any sort of application enters the prostatic ducts. The application probably superficially cauterizes, or, if you please, constricts only the mouths of these orifices, any other beneficial effect being explicable only by its action upon the mucous membrane and its germ-destroying properties. The large, tumefied prostate in masturbators or following infection of the deep urethra often speedily subsides under occasional applications of nitrate of silver. If prostatic overstrain be continued during middle life, as is likely, it is evident that there is danger of prostatic hypertrophy. So long as the tissues of the body are elastic and well nourished, tissue metamorphosis occurring readily and rapidly, the various organs and tissues soon recuperate and regain their normal status, even after having been subjected to frequent and extraordinary strain. As middle life approaches, however, this recuperative power is impaired. In the case of the prostate, the penalty of overstrain is obvious. As the prostate enlarges, the conditions which produced it compound. Furor sexualis and obstinate priapism are, in some prostatiques, familiar experiences.

Diathetic influences, such as gout and rheumatism, in the etiology of prostatic hypertrophy, should, I think, be taken into consideration, although they are not so important as some would have us believe. In considering these diathetic states in relation to prostatic pathology, it is fair, I think, to again refer to prostatic overstrain as the primary condition. To use what is perhaps an indefinite, but none the less comprehensive term, the tendency to chronic formative irritation—*i. e.*, chronic pathologic tissue building—seen in many gouty and rheumatic subjects, particularly late in life, may manifest itself only in some organ or tissue which is or has been many years before, perhaps, subjected to injury or overstrain. Taking again as our point of departure the thickened and stiffened joint in the old man, injured many years before, the possible importance of gout and rheumatism is obvious. In many cases of so-called rheumatic gout or arthritis deformans, the process is limited to a joint or joints which were injured in early life.

Gout and rheumatism should occupy at least a minor position in the etiology of late prostatic disease, because such constitutional states promote tissue irritability and a tendency to new growth at points of strain and irritation, whether present or remote.

Prostatic enlargement, as shown in the *resumé* of etiologic opinions, has been attributed to stricture. Stricture of the urethra often produces chronic congestion and hyperplasia of the prostate—*i. e.*, overstrain, with resulting circulatory and nutritive disturbance, if you please; but within certain limits the danger of resulting prostatic hypertrophy is inversely to the degree of obstruction. In short, strictures of large caliber in the *pars pendulosa* produce proportionately greater reflex prostatic disturbance than deeper strictures of small caliber. The man who at from thirty to forty has a tight, deep stricture is pretty safe from enlarged prostate in after years. If the prostate does become enlarged, the enlargement is not likely to encroach upon the prostatourethral caliber or jut into the vesical neck. Irritation and congestion develop, it is true, but hyperplasia of the portion of the prostate most likely to obstruct urination is prevented by the pressure of the urine in the prostatic urethra. In perform-

ing perineal section upon tight musculo-membranous strictures, I have sometimes found the prostatic urethra extremely dilated at the expense, apparently, of that portion of the prostate immediately contiguous to the prostatic urethra. Relative prostatic atrophy from pressure is well shown in calculi lodged in the prostatic urethra. There may be, it is true, compensatory hypertrophy of the outlying tissues of the prostate; but there is a very logical analogy, viz., cardiac hypertrophy followed by dilatation in valve obstruction. Whatever the cause of pathologic tissue building, hyperplasia or hypertrophy of tissue, the tissue thus formed has a purpose. This is not always beneficial, it is true, for certain anatomic or physiologic conditions frequently defeat nature's object in this direction, as seen in the case of urethral stricture; but even in the latter the new growth is designed to promote rest and relieving strain. Admitting that nature does nothing haphazard, the proliferation of glandular, connective and muscular tissue incidental to hypertrophy of the prostate is readily understood.

In the absence of special causes of irritation or strain, the prostate should atrophy in old age *pari passu* with the diminution of sexual activity, as it does in castrated animals and eunuchs. That it does not frequently atrophy is explicable by two facts, viz.: (1) Few individuals are in a perfectly physiologic sexual condition during their entire lives. Fewer still enjoy a normal old age. (2) The sexual activity is long-enduring in the male, and the sexual organs may remain capable of the physiologic performance of their functions until the individual is otherwise in a condition of advanced senility. To put the latter proposition more plainly, and without facetious intent, the individual often dies before his sexual organs have had time to do so.

Prostatic overgrowth from hyper-functional activity of the organ, this being the most comprehensive term for describing its etiology in detail, may affect the prostate in several different ways. There may be excess of glandular tissue, which Moullin believes to be of paramount importance. There may be excess of fibroid tissue. The enlargement may be diffuse and general, or circumscribed. The variety of the enlargement depends largely upon certain conditions secondary to the hypertrophy. Anatomically, it depends upon the relative proportion of fibroid, connective and glandular tissue. Much depends upon the age of the subject. If a large number of prostates in comparatively young subjects, in whom more or less congestion and enlargement are present—which are not usually considered to be conditions preliminary to prostatic hypertrophy, but which I believe to be so—be examined, the proportion of glandular tissue will be found to be much greater than in more advanced cases. The glandular elements are, to a certain extent, strangled out by fibro-connective tissue development as the case progresses. This metamorphosis explains why the prostatic congestions, inflammations and hyperplasias of early life have been considered different from and unrelated to the prostatic pathology of old age.

Disturbance of micturition, from whatever cause, I believe, as already stated, to be a powerful factor in the etiology of prostatic hypertrophy. In most cases there is a history of more or less marked urinary irritation and obstruction, extending perhaps over a number of years. In short, the so-called secondary results and the most important symptom of prostatic hypertrophy exist long before the enlargement is diagnosed. In some cases of prostatic hypertrophy considerable residual urine has collected, as a consequence of the obstruction, before the surgeon's aid is sought. Decomposition exceptionally occurs before

exploration or instrumentation. Cystitis in the prostatique is usually an ingraft upon the hypertrophy, and the resulting depression in the bas fond, due, as a rule, to septic catheterization. If the residuum remains aseptic, it gives rise to very little discomfort. Sometimes the patient is comfortable, although the residuum is large, until acute congestion, with resulting obstruction, occurs. Considerable obstruction, with large residuum, may form in posterior median hypertrophy at the vesical neck, which is not readily discoverable.

The relation of inflammation of one kind or another to prostatic hypertrophy is somewhat similar to that of prostatic overstrain, with which inflammation is always related. Inflammation produces profound nutritive changes, and by inducing frequent micturition produces a condition of unrest which must result in an enhancement of hyperplasia. No matter what the function of the prostatic muscular tissue may be, it comes into play in both ejaculation and micturition, and the excessive performance of either of these acts means muscular overwork and muscular overgrowth. The final quality of the overgrowth depends upon the extent and relative proportion of connective tissue hyperplasia and sclerosis, and glandular changes.

That gonorrhea and its congeners bear an etiologic relation to prostatic disease in later life I am convinced, simply because I have become satisfied that inflammations and congestions of all kinds are important etiologic factors—this with due deference to Thompson's opposite view.

My impressions on the relation of inflammation in early life to late prostatic disease date back many years. They have been crystallized by dissections of nearly three hundred prostates within the last six or seven years.

In various specimens of incipient prostatic overgrowth of probable inflammatory origin, I have been greatly interested to observe the whorl-like localization of the hyperplastic connective and muscular tissue, indicating the tendency to circumscription in certain areas. In some specimens the preponderance, on the one hand, of glandular, and, on the other, of fibro-muscular tissue, has been especially marked.

I formerly considered distinct fibromyomatous or glandular tumors, which may be shelled out of the prostate upon division of the investing tissues, as apparently contradictory to some phases of the etiology I have outlined. Such tumors are sometimes merely covered in by the prostatic capsule, while in other instances they are imbedded in the organ at a greater or less depth. I now believe, however, that the foregoing etiologic factors bear an important causal relation to such growths, although it is much more difficult to define the relation of cause and effect than in cases in which there is a distinct general glandular or fibro-muscular enlargement. To explain the occurrence of these growths satisfactorily would be to explain uterine fibromyomata, which offer the clearest analogy to the growths under consideration. The old-time explanation, based upon the supposed homology of the uterus and prostate, explains nothing, particularly in view of the fact that the etiologic theories of uterine fibromyomata thus far advanced are obscure. Cohnheim's theory is, possibly, as comprehensive and logical as anything thus far advanced. Idiosyncrasy, in the form of a local histological aberration, is certainly worthy of consideration. Admitting such a local idiosyncrasy, however, it might still remain for the etiologic factors which I have given to determine the occurrence of the growths. When once a circumscribed growth begins, certain local conditions may tend to enhance its cir-

cumscription, as is seen in the pedunculation of the so-called median lobe, in which the increasing frequency of micturition unquestionably has some effect in modifying the form of the enlargement.

Local influences have, in my estimation, a very important bearing upon the circumscription of the tumors. Having studied these cases post-mortem and under the microscope from their incipency to full development, my impressions are as follows :

1. That, as a consequence of a disproportion in the quantity of histologic elements involved in inflammatory or congestive hyperplasia of the prostate, the segregation of certain elements occurs in some particular area, with a preponderance of glandular, muscular or fibrous elements. This is associated with; in the case of the glandular, which is by far the most important structure for consideration, more or less irritation and inflammation from infection.

2. There is an attempt at segregation of the involved area by the development of connective tissue around it in essentially the same manner as in the case of a foreign body, or of a tumor of any kind which has a tendency to encystment. Mere hyperplasia and condensation of the enveloping connective tissues form a pseudo-encystment, even where there is little or no irritation save that produced by the mechanical pressure of the involved area upon the surrounding tissues, with resultant disturbance of nutrition. We find, even in a process so innocuous as lipoma, a distinct segregation of the connective tissue of the surrounding parts, forming a fragile capsule. Once segregation is established, the line of demarkation increases *pari passu* with the progress of the case in general, from the tendency of the tissues of the involved area, on the one hand, and the investing connective tissues, on the other, to propagate after their kind. In by far the majority of cases, I believe that the point of departure is the glandular elements of the prostate, the enveloping connective tissue and the varying degrees of fibrous and muscular tissues involved in the circumscribed tumor being merely incidental.

CONCLUSIONS.

1. The principal defect in most theories of the etiology of prostatic hypertrophy is the arbitrary attempt to attribute it to one particular cause or co-related set of causes. This is especially true of the theories of inflammation, senility, general atheroma and diathetic conditions.

2. The prostate, while in some respects an involuntary muscle, is anatomically and functionally a sexual gland.

3. The relation of the all-important structure of the organ to micturition is accidental, as shown by the perfect performance of this function prior to the period of development of its glandular structure. The urinary function is physiologically secondary, and where prominent is pathologic.

4. Granted the sexual and glandulo-sexual function of the prostate, it is chiefly to a perturbation of this function that we must look for an explanation of so-called hypertrophy of the organ, and especially of all pathologic disturbances not directly due to traumatism or infection.

5. Even though the muscular tissue plays a secondary rôle, it deserves consideration in prostatic pathology. Muscular overwork is probably a minor factor at least in the etiology of prostatic hypertrophy. This is especially true when once the so-called hypertrophy has fairly begun.

6. Hypertrophy of the prostate is probably due largely to overstrain of the

organ during the period of its greatest sexual activity. This overstrain produces congestion and glandular proliferation, connective tissue and muscular hyperplasia. If this persists for a long time, it is not followed by resolution, but by permanent enlargement. Prolonged and ungratified sexual excitement, with the resulting disturbance of the circulation of the prostate, may equally with sexual excess so derange the nutrition of the gland that hypertrophy results late in life.

7. Inflammation, gonorrheal or otherwise, is an important etiologic factor.

8. The conditions constituting the point of departure from the normal prostate that underlie prostatic hypertrophy come on earlier in life than is usually supposed, a large proportion of individuals being affected by it.

9. Hypertrophy is usually attributed to senile change, simply because the secondary results of prostatic enlargement do not appear or become marked in most instances until the patient is well along in years. Prostatic overgrowth occurs, as a rule, before middle age, but residual urine does not accumulate in any great quantity until after the bladder walls have become atonic by virtue of the physiologic changes of age, and the insidious effects of unnoticed obstruction. Residual urine in considerable amount may be innocuous until germs enter the bladder and set up decomposition.

10. Prostatic hypertrophy in advanced life, from overstrain of the organ at an earlier period, is explicable upon the same grounds as is the development of arthritic disturbance, in men beyond middle age, at the site of a traumatism—*i. e.*, a strain received in early life.

11. The changes produced by inflammation in early life may go steadily on and later develop prostatic hypertrophy.

12. Senility, gout and rheumatism are, in all probability, not exciting causes of prostatic hypertrophy, but are determining factors, in so far as they promote irritability of tissue, a tendency to connective tissue proliferation, inelasticity of tissue, and, in the case of the diatheses mentioned, hyperacidity of the urine with frequent micturition.

13. General atheroma is often responsible for a condition in which both bladder and prostate are thickened and sclerosed. This condition, of all others, should not be classed as hypertrophy. Prostatic hypertrophy is, to a certain degree, an evidence of conservatism on the part of nature in her attempts to resist strain and promote rest of a much-abused organ. This resistance begins at the time when such abuse is most pronounced, although its effects may not be manifested until the time element and other influences have come into play, later in life.

14. While the prostate is not normally a urinary organ, strictly speaking, and while disturbance of micturition *per se* may not cause prostatic hypertrophy, said disturbance causes muscular overwork. When once it arises as a consequence of prostatic hypertrophy, it necessarily reacts upon the diseased organ and enhances the pathologic condition. Inasmuch as frequent micturition is generally dependent upon conditions directly or indirectly affecting the prostate—usually of an inflammatory nature—it must be conceded an important rôle in the etiology of prostatic hypertrophy, if we accept inflammation as a factor.

15. In normal old age the prostate should atrophy. That it does not do so more frequently is explained (1) by the prolonged duration of the sexual function, incidental to the developmental effect of overindulgence and other causes of sexual overstimulation; (2) by the frequency of hyperplasia of the organ from the causes herein presented.

16. It may be remarked in passing that neither the human male nor female is, on the average, perfectly healthy sexually. The sexual function is made subservient to gratification rather than procreation—for which it was originally designed. The sexual life of the lower animals typifies the normal, in most instances, while that of the human subject typifies the abnormal, or, if you please, the artificial. There is no question in my mind as to the truth of this assertion regarding the female, and I suspect that it bears with equal force upon the sexual function and organs of the male. That an organ is patient and long-suffering under abuses of its physiology does not obtain for its possessor immunity from future penalties.

17. Careful rectal examinations of men, from the age of twenty upwards, show that a prostate which is perfectly normal in size, consistency and sensibility is the exception rather than the rule. This is true of the masturbator and sexual hypochondriac, as well as of the individual who has had posterior urethritis, although the latter condition is, it must be confessed, a very frequent explanation. That this aberration of the prostate is followed, in the majority of cases, by a return to the normal condition is highly improbable, in view of the fact that most men so affected lead lives which are so unphysiologic, from a sexual and dietary standpoint, that the condition is likely to be aggravated rather than improved. To expect complete resolution in patients who continue sexual abuse and perhaps overindulge in the pleasures of the table would be absurd. The penalty in such cases is, in my opinion, very frequently hypertrophy of the prostate.

18. The nomenclature of prostatic disease should be thoroughly overhauled and remodeled along scientific lines. As now used, the term "prostatic hypertrophy" is an omnibus term covering a number of different conditions. When this has been done, we will hear less of total prostatectomy and more of the enucleation of prostatic tumors.

SUSPENSION OF THE UTERUS.

BY E. J. NEVILLE, M. D., of St. Louis.

It is not my intention to advance any chapter or theory upon ventrofixation, but merely state my own practical experience in the corrections of retrodisplacement of the uterus by an abdominal operation.

Let it be understood that suspension of the uterus through abdominal incision should be resorted to only in cases of persistent retrodisplacement which do not yield to simple treatment, and then only should such steps be taken where such displacement interferes seriously with health.

It will be noticed in the following cases that the simple methods of treating retrodisplacement extended over some months, with failure to bring the uterus into its normal position. You will note that in every case upon which I have operated there existed symptoms which seriously interfered with health, such as backache, pelvic discomforts, exaggerated during menstrual period, inability to walk without pain, pain in abdomen and thighs, nervousness, headache, dyspepsia and constipation. These symptoms are the chief indications for operation.

You will note that in the following cases, in which it was possible to lift the

uterus and support it on a wool pack or by pessary, that such treatment gave decided relief, and after fair trial many of the distressing symptoms became less severe in character and many entirely disappeared.

A few words might be said as to the method of operation. An abdominal incision just over the symphysis about two inches in length; after opening the cavity, the introduction of two fingers and elevating the fundus, bringing it up to the abdominal wall; you then carry two silk ligatures through the fundus on a line posterior to the uterine ends of the tubes, passing the ligatures through the peritoneum, then through the abdominal wall, passing the ligatures from within out, lessening the chances for infection; Howard Kelly's methods of operation being somewhat different from mine, inasmuch as he brings the posterior wall of the uterus in contact with the abdominal wall, making an unnatural ante flexion for a retroflexion. On one occasion I did the Kelly operation, bringing the posterior wall of the uterus well up against the abdominal wall. I found that the fundus of the uterus pressed upon the bladder, interfering with the natural distention and causing dysuria, which persisted for seven weeks, but after which subsided, leaving the patient in perfect health, with one exception, that of painful menstruation.

It is a known fact that actual fixation does not last but a short time. We find upon bimanual examination that the uterus is found some distance from the abdominal wall, but is found to be limited in its movements by long adhesions between the fundus and the abdominal wall.

I am not able to answer the important question as to the behavior during pregnancy and labor following this operation. Dr. C. P. Noble, of Philadelphia, has found that all the serious difficulties have been met with in the cases having broad adhesions between the uterus and the abdominal wall, but he did not find it possible in the collation of his statistics to distinguish between the results of the various methods of operating. The following difficulties during pregnancy may be noted following this operation:

- (a) Constant pain in the hypogastrium.
- (b) Retraction of scar.
- (c) Cervix retracts into the pelvis; may even become displaced up into the abdominal cavity.
- (d) Anterior uterine wall failing to expand, forming a large, fleshy tumor mass, obstructing the superior strait. As a result, we find that the posterior wall of the uterus may become as thin as tissue paper.
- (e) Abortion or premature labor may come on spontaneously.
- (f) Excessive nausea, due to traction on the scar.

DIFFICULTIES DURING LABOR.

- (a) Labor may be delayed some weeks beyond term.
- (b) Labor may be powerless, owing to the inability of the thinned-out posterior uterine segment to expel the fetus.
- (c) The labor may be obstructed by the mass of tissue in the anterior wall, as by a tumor.
- (d) The proper expansion of the cervix is hindered by its abnormal position high up even in the abdomen.
- (e) Malpositions, such as transverse and breech, are more frequent than the normal position.

(*f*) The uterus in labor may tear loose, forming large hematoma at the point of rupture.

I believe that the difficulties of pregnancy and labor following this operation may be overcome to some extent by its technique. Howard Kelly attaches the posterior wall of the uterus to the abdominal wall, making an unnatural ante-flexion for a retroflexion, the objections to this operation being, first, that the position of the uterus might cause a retraction of the cervix into the abdominal cavity; second, during pregnancy we find that the anterior wall fails to expand, forming a large tumorous mass, obstructing the superior strait; third, as a result we find a thinning of the posterior wall, which, I think, is a most serious condition that in time produces abortion or premature labor.

We have, then, found that of the six difficulties confronting us in pregnancy, we can, through proper technique, overcome three of the most serious.

Of the six difficulties during labor we can also overcome three of the most serious. First, labor may be powerless owing to the inability of the thinned-out posterior uterine segment to expel the fetus; second, the labor may be obstructed by the mass of tissue in the anterior uterine wall, as by a tumor; third, the proper expansion of the cervix is hindered by its abnormal position high up even in the abdomen.

The method of suspending the uterus by bringing its anterior face against the anterior wall I object to most emphatically, on account of its many mechanical disadvantages. A uterus lifted in this manner hangs with its weight upon its attachment and in time must resume its retrodisplacement, for the simple reason that adhesions must become elongated, therefore allowing the uterus to again assume its posterior position, with a probable long, fibrous band connecting the anterior wall of the uterus with the abdominal wall. If the adhesions are so broad as not to allow of this condition, Dr. C. P. Noble has well shown that all kinds of complications follow broad adhesions during pregnancy and labor. This fibrous band may be the cause of serious intestinal trouble. It has at no time corrected the displacement, but has now produced a permanent retrodisplacement, which could not be temporarily corrected by a pessary or wool pack.

CASE 1.—Miss H., age twenty-seven; servant. I first saw this case September 9, 1898. The patient complained of pain in the thighs and abdomen, and said she was unable to walk any distance without pelvic discomfort. On digital examination I found a retrodisplaced uterus with an enlarged right ovary, but no adhesions. I gave her the usual local treatment, including the wool pack support to the uterus, for five months with marked improvement, but I was unable to do anything for the prolapsed ovary, the pessary causing irritation to this organ. After some consideration I decided upon an abdominal operation. The patient was sent to the hospital on February 13th, and on the morning of the 15th the abdomen was opened. I found the appendix attached to the right ovary. After removing the appendix and ovary I attached the uterus to the abdominal wall. The patient made a rapid recovery and is at present in Kansas City employed as a servant. She writes that she is in perfect health.

CASE 2.—Miss G., age thirty-one; servant. Patient entered my office April 12, 1898. She was very nervous, and complained principally of backache and pelvic tenesmus. On digital examination I found the uterus retroverted, with adhesions fixing the uterus in its malposition. I sent her to the hospital on May 4th, and on May 7th I did a ventral fixation. I saw her about three months after the operation, when she complained of some pain in the back. This was relieved

after four days' treatment. About eight months ago I saw her, and she is now in perfect health. She is also working as a house servant.

CASE 3.—Mrs. K., age thirty-four; married, mother of one child. Patient entered my office April 2, 1898, complaining of severe pain in the back. She said that at times she suffered with severe headache. She also complained of pain in the abdomen, which she declared was so severe that she would surely die if she were not relieved. This pain in the abdomen had continued for six weeks. She could not walk without pain. On digital examination I found a retroversion in the third degree. After the usual routine treatment for a period of three months she was much improved. I then gave support to the uterus by a pessary, but she still complained of pain on the left side in and about the ovary. Seven months after treatment she returned, saying she could stand the pain no longer, and if she was not relieved she would seek other medical advice. She was put in the chair and an examination revealed an enlarged left ovary. I found it was impossible to relieve her, so sent her to the hospital and on November 10, 1898, I opened the abdomen. On the left ovary I found a cyst about the size of a hen's egg. I removed the organ and fixed the uterus to the abdominal wall. The patient made a quick recovery. She is at present in the best of health. She has gained about thirty pounds in weight.

CASE 4.—Mrs. L., age thirty-one; mother of two children. Had enjoyed good health till the birth of her last child. After her last confinement she developed a backache, from which she could get no relief. She lost flesh steadily, suffered from dyspepsia and constipation, and was very nervous. I first saw the patient September 22, 1898. On digital examination found retroversion of the uterus in the third degree. The uterus movable. There were no adhesions, and I had no difficulty in lifting the uterus to a normal position. After six weeks of treatment with the wool pack I placed a Smith pessary in position. The patient went on for six months in apparently good health. She afterwards contracted gonorrhea. She was then under treatment for a period of six weeks. The acute symptoms of gonorrhea subsided, leaving a serious chronic endometritis with marked muco-purulent discharge. I found that the uterus had assumed its old retrodisplacement, it being necessary to take out the pessary on account of inflammation. The patient, knowing nothing of her disease, naturally became discouraged, and told her husband she intended to seek advice from other physicians. After a lengthy conversation with the husband we decided on an operation. On July 7, 1899, I did a curettage in conjunction with a ventral fixation. On opening the abdomen I found a slight inflammatory condition of both tubes. I hesitated for a moment as to the course to pursue, but finally decided to leave the tubes and suspend the uterus from the abdominal wall. The patient made an uninterrupted recovery, the chronic endometritis subsided, and at this writing she is in perfect health.

CASE 5.—Mrs. C.; married. Came to my office October 3, 1898. The patient was pale and nervous. She complained of not being able to stand or walk any length of time. She had been treated with drugs without relief, as might have been expected. She had some pelvic inflammation following a miscarriage. I placed the patient on the table, and on digital examination found the uterus was retrodisplaced and immovable, being adherent to the rectum. I made an attempt to break up the adhesions, but found it impossible to do so. I informed the patient that her only means of relief would be through an operation. She then left my office and did not return till September 13, 1899. She said she had returned to tell me she had decided on an operation. She was sent to the hospital on September 15th, and on the morning of the 17th I opened the abdomen and broke up the adhesions, after which I suspended the uterus to the abdominal wall. The patient made a rapid recovery with the exception of a dysuria and painful menstruation. I saw the patient last on November 9, 1900. She is in perfect health with the exception that the painful menstruation still persists.

The dysuria disappeared seven weeks after the operation. I did the Kelly operation in this case, bringing the posterior wall of the uterus well up against the abdominal wall. This unnatural antelexion of the uterus was responsible for the dysuria and the painful menstruation.

CASE 6.—Mrs. R., age thirty-one; domestic servant. This case was referred to me by Dr. Goldstein. The patient complained of pelvic discomfort, exaggerated during menstruation, and was very nervous. She said she suffered from severe headache at times, and that she could not remain on her feet more than a few hours at a time. On digital examination I found a retroversion. After conversation with the patient as to the method of treatment, she decided on the operative route. I sent her to the hospital at once, and on December 6, 1900, the operation was performed. She made a speedy recovery, and is now doing work as a domestic and in perfect health.

CASE 7.—Miss G., twenty-nine years of age; servant. This case is identical with case 6.

CASE 8.—Mrs. H., age twenty-nine; mother of two children. The patient first called on me December 16, 1900. She complained of severe headache at times and of backache and pelvic tenesmus. She was extremely nervous and suffering with hysterical hyperesthesia. She had been under the care of other physicians for the past two years without result. On digital examination I found a laceration of the perineum, a retroflexion with prolapsed and enlarged right ovary. The uterus was slightly enlarged. After thirty days' local treatment the patient seemed improved, but not enough to satisfy her. I finally decided on operation. On January 27, 1901, I sent the patient to the hospital, and on the morning of the 29th opened the abdomen. I found the right ovary twice the normal size and prolapsed. The ovary was removed, and the uterus suspended to the abdominal wall. This patient did fairly well until the 7th of February, when she developed an inflammation of the broad ligament. This finally disappeared, leaving the patient in good health.

Congenital retroversions in young unmarried women are very difficult to cure with the pessary; still I believe this instrument should always be tried, with probably one exception. Every woman who uses a pessary should be under the care of a physician, and for this reason it is often advisable to recommend immediate operation to poor women as the quickest and surest method of cure.

NASAL DISEASES AND OBSTRUCTIONS AS A CAUSE OF LARYNGITIS, AND METHODS FOR RELIEF OF SAME.*

BY W. B. SHIELDS, M. D., of St. Louis.

The lack of free drainage from the nasal cavities, due to any obstructive lesion, the stoppage of thorough aeration on account of a partial or complete occlusion of the nasal fossa, or atrophic rhinitis and pharyngitis, with constant dropping of atrophic scabs into the larynx, are, in my judgment, by far the most frequent causes of laryngitis in the adult. In children, laryngitis is more frequently due to the presence of adenoids or enlarged faucial tonsils. Any one who has seen a number of cases of laryngitis in the adult, can readily recall the fact that the majority of patients have complained, at some time or other, of more or less dripping into the throat. It is true that there are some cases of laryngitis of lithemic origin, a larger number due to enlarged lingual tonsils, and a fewer number accompanying granular pharyngitis with oversecretion, but

* Read before the St. Louis Medical Society.

I am of the opinion that the nasal obstructive lesions or atrophy of the mucous membrane lining its cavities are the direct cause of the majority of laryngeal derangements.

In my experience, purulent inflammation of the accessory nasal cavities is much less apt to cause an accompanying laryngitis than obstruction of the nasal fossa. The pus discharge is less apt to become solid and is more freely gotten rid of than nasal secretions from the fossa retained and hardened from improper lack of drainage and aeration. First and most frequent on the list of nasal obstructions are ridges and spurs of the septum, nearly always accompanied by more or less deflection of same. Most of the septal ridges are, in my experience, due to a deflection, the latter being in some cases slight, in others quite marked. I have seen ridges unaccompanied by deflection of the septum, but I think them rare. Spurs of the septum are rarely accompanied by deflection, but, according to my observation, are not often found. In those cases where we find ridges accompanied by marked deflection, the side on which we find the ridge is either entirely or almost closed, the opposite fossa being very large, allowing a much too large volume of cold air, laden with dust and micro-organisms, to enter the respiratory tract, affecting the nose, eustachian tube and larynx, the latter more especially on account of the air not being heated and moistened, the nasal surface of one fossa not being sufficient to moisten this large volume of air. On the side of obstruction secretions accumulate on account of lack of free drainage and form masses more or less hard, which generally drop back and not infrequently into the larynx, setting up an irritation both mechanical and on account of the acrid matter of the secretions. In a patient thus affected, this combination—too much cold dry air, dust and micro-organisms, and hardened, acrid secretions—produces, after a longer or shorter time, a chronic laryngitis, which can only be relieved by surgical procedure directed at the cause in the nose. Hypertrophic rhinitis, to a less degree, may cause laryngitis by mechanical obstruction and retention of secretions, which harden and drop: but, as I take it, the laryngitis which accompanies hypertrophic rhinitis is more due to mouth-breathing, especially at night, which is also the main cause of laryngitis accompanying enlarged tonsils and adenoids in children. Hypertrophied lingual tonsils cause laryngeal irritation and congestion, which can always be thoroughly relieved by excision of the enlarged tonsils. I think quite a number of cases of supposed laryngitis are merely cases of reflex irritation from hypertrophy of the lingual tonsils, and are needlessly and improperly treated by means of local applications to the larynx, when excision of the tonsils or cauterization of enlarged lingual veins would relieve the trouble quickly and effectually.

The subject of the causation of septal deflections is one of much interest to me. In an examination of the nasal fossa of more than four hundred skulls in the anatomical museum of the Royal College of Physicians and Surgeons in London, I found more or less deflection in every case excepting the skulls of savage nations. Why this difference should exist I cannot imagine. Many theories have been advanced explaining why civilized man should have septal deflections and savages be exempt therefrom; but these explanations, to me, have never been satisfactory. From my own observation, I think that nearly all deflections are due to trauma, more especially beginning when the child is young, and in most cases from falling on the face, with, at that time, no apparent harm done,

which, after the child grows, becomes more pronounced and aggravated. These deflections are nearly always of the cartilage, but in some cases the deflection extends back, the junction of ethmoid and vomer being the seat of the bending, the ridge being along the line of greatest deflection. Purulent ethmoiditis of a chronic nature causes laryngitis, as does chronic purulent inflammation of the antrum of Highmore.

The treatment of these conditions is nearly always surgical. For removing spurs and ridges I am in the habit of using Hajek's chisels in the majority of cases, in preference to the saw. If the ridge is very long I prefer the saw, but otherwise prefer the chisel, which causes the patient much less discomfort, can be used more rapidly, and leaves a clean-cut surface. For removing spurs pure and simple these chisels are most excellent. In hypertrophic rhinitis I can see no objection to cauterization, as I have seen most excellent results following same. If the lower turbinate is very large and beefy, I think a partial removal with scissors and snare a wise procedure, and the results are more satisfactory than cauterization.

Where there is a persistent ethmoiditis with enlargement of the middle turbinate, a removal of the latter, either partial or complete, is necessary, and then breaking into the ethmoidal cells and curetting same thoroughly. In removing the turbinate I have found Holmes' scissors an excellent instrument, simplifying the operation very much. Heretofore I have used Hajek's knife, the blade bent at an angle of about forty degrees, cutting through the turbinate, and then putting the snare over the cut part, snaring off same.

I have found that the removal of the entire middle turbinate is quite a difficult thing in some cases, and have quite often been compelled to remove a high ridge of the septum or an enlarged tuberculum septi before being able to accomplish my object.

Where there is a complete or partial occlusion of one fossa, due to marked deflection of the septum, an operation for straightening of latter is indicated. As there is a lengthening of the cartilaginous septum in all of these cases, an operation for shortening same occurs to me to be the best method of remedying this condition. Of the numerous operations, Gleason's or Hajek's seems to me to be the best. Gleason's operation is made by a horseshoe-shaped incision around the deflection, the lower part of incision being the articulation between the cartilage and superior maxilla. He then fractures the neck of flap above, throws it into the fossa of the concavity, holds it with a plug put into the other fossa to control hemorrhage and hold flap in place. Hajek, of Vienna, follows the articulation of bone and cartilage, starting incision anteriorly, passing back to vomer, following it until he reaches the perpendicular plate of the ethmoid, then continues the incision upwards, being governed in the length of incision by the amount of deflection. The after-treatment is the same as in Gleason's operation. Gleason uses saws and Hajek knives.

CLINICAL REPORTS.

THREE CASES OF *TINEA CIRCINATA* IN ADULTS.

(From the Dermatological Clinic of Prof. Hardaway, St. Louis Polyclinic.)

By WILLIAM P. LOTH, M. D., of St. Louis.

Assistant.

(ILLUSTRATED.)

CASE I.—Peter B., age thirty years, shows upon the extensor and outer aspect of the right arm, immediately above the wrist, an area about four inches in length and two inches in breadth, composed of small, nodular papules, or rather masses, and a number of follicular pustules. The papules vary in size from that of a pea to a small nut, are flattened and of rather soft consistence. Puncture of some of these papules causes a drop of pus to exude from the depth of the follicle, and in many of them the hairs are broken off short. On the anterior aspect of the forearm is a smaller discoid area, about the size of a silver dollar, covered with thin, papery scales, showing some broken hairs and a number of follicular pustules. This area, as well as the patch on the wrist, is sharply defined, elevated, rather soft to touch and does not itch. Microscopical examination of crusts from the first patch and of scales from the area on the forearm showed the presence of the large-spore ring-worm fungus—that is, the *macrosporon ecto-endothrix*. Upon inquiry it was learned that the affection had begun two months before the patient presented himself at the clinic, and that at the time it was first noticed his child was suffering from a disease of the scalp; attended with alopecia, and that the father had been carrying this child about with its head resting upon his arm. Under the application of a five per cent. xeroform ointment the lesions disappeared in a short time.

CASE II.—Miss M. M., age twenty years, presented herself at the clinic, giving the following history: One year before there appeared upon the back of the right hand a "ring-worm," beginning as a group of papules, which grew centrally, healing in the center as the periphery extended. Several months later a similar patch appeared on the back of the left wrist, and since then both have



persisted. The only symptom complained of was a slight pruritus when the hands became warm. On examination there was found on the extensor surface of both hands a rather sharply defined area bordered by a line of vesicles and

vesico-pustules, some recent, others partly crusted, as shown in the accompanying photograph, for which I am indebted to Dr. H. P. Wells. The center of each area presented a slightly reddened, scaly or crusted surface, with very little elevation of the skin, with here and there a fresh vesicle. Examination of scales taken from the periphery of both lesions disclosed the presence of the large-spore ring-worm fungus, but staining of cover-glass preparations made from the discharge from the vesicles failed to show the presence of any spores. On inquiry it was ascertained that the patient had similar patches on the neck and upon the thigh. An ointment containing four per cent. each of sulphur and balsam of Peru was applied, which caused the disappearance of all evidence of the infection, with the exception of slight superficial scaliness, which was removed by the application of a four per cent. salicylic acid paste.

CASE III.—Harry R., twenty-four years old; hostler. On the left wrist, occupying an area on its outer and extensor aspect, was a thick group of acuminate pustules, each one pierced by a hair. Between these pustules the surface was reddened and edematous, though the pustules were so thickly placed that but little of the intervening skin surface was visible. About the periphery of the patch were several isolated groups of three or four pustules of a similar character. Some of the pustules had ruptured, the contents drying into a crust of a pale straw color. In the center of the patch there was a slight appearance of atrophy, where involution had extended somewhat further. The hairs could be easily epilated, the root-sheath surrounding each hair, and a minute drop of pus clinging to it. On pressure of the pustules after rupture, a drop of slightly tenacious pus could be forced out. Microscopical examination of the pus and of the hair showed the presence of the large-spore fungus, macrosporon endothrix. A small pustule at the periphery of the patch was excised and hardened in the usual manner. Sections stained with picro-carmin and anilin-gentian violet, decolorized with anilin oil and nitric acid (Unna), showed the fungus to ensheath the hair, undoubtedly entering the space between the external and internal root-sheath: the spores had spread into the follicles, acting leucotactically and leading to the accumulation of leucocytes about the follicle. This led to the formation of pustules, destroying the follicle, loosening the hair, and extending slightly into the perifollicular tissue. The vessels were dilated and surrounded with leucocytes and lymphoid cells, causing the inflammatory zone to gradually subside from the pustule outward. Throughout the pustule spores of immense size were found, occurring in clusters of two or three, or singly, but these were few when considering the amount of inflammatory disturbance present. With this method of staining, the spores stand out very distinctly as round, blue spherical bodies. No mycelia were found in the sections. Dr. M. F. Engman very kindly supplied me with this microscopical report. Upon culture, the typical ectothrix growth resulted on agar and gelatin. The treatment adopted consisted of epilation, followed by the application of equal parts of trikresol and alcohol three times weekly, with the application of a three per cent. xeroform salve in the interim. Slight scarring remained to mark the site of the lesion.

These three cases exemplify some of the conclusions reached by Sabouraud after an exhaustive study of the various species of fungus which cause trichophytosis of the skin. Case I. is an instance of the form which he refers to as being due to secondary infection from trichophytic ring-worm of the head (*trichophytie accessoire des téguments*), in which the parasite is of the same species as that responsible for the primary infection, namely, trichophyton endothrix of human origin. Case III. furnishes an example of the suppurative form caused by pyogenic trichophytons, almost always of animal origin, especially from the horse,

and which, according to Sabouraud, constitutes about one-third of all varieties of *tinea circinata*. This is also the form which closely resembles kerion of the scalp, occasionally found in children and young adults, and in such cases often also directly traceable to animal origin. Case II. presented a picture which agreed very closely with the condition described by Kaposi as *herpes tonsurans maculosus et squamosus*, a condition which is rarely seen so typically exemplified here with such a distinct, sharply defined scaly area bordered by a ring of vesicular lesions. It is to be remembered, however, that the term *herpes tonsurans maculosus et squamosus* is regarded as referring only to the condition due to ring-worm infection, and does not include the affection which is generally known as *pityriasis rosea*, an affection regarded by almost all dermatologists as a distinct disease, not due to the ring-worm fungus, though to Kaposi both affections were one and the same disease. A further fact is strikingly shown by these three cases, one to which Malcolm Morris refers, viz., that age is an important factor in the case of scalp ring-worm, the affection being almost peculiar to childhood. In none of these cases was there any involvement of the scalp, though in all of them the infection of the skin had persisted for some time, in one case for more than one year. They also show that there seems to be no limit of age in the case of ring-worm of the body.

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EDITED BY

WILLARD BARTLETT, M. D.
MALVERN B. CLOPTON, M. D.
HUGO EHRENFEST, M. D.
MARTIN F. ENGMAN, M. D.
ALFRED FRIEDLANDER, M. D.
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SIDNEY I. SCHWAB, M. D.
ALBERT E. TAUSSIG, M. D.

OTHO F. BALL, M. D. Managing Editor.

COLLABORATORS:

MAX MICHAELIS, M. D.,
Docent of Internal Medicine, University of Berlin, Germany.

JULIUS NEUMANN, M. D.,
Docent of Obstetrics and Gynecology, University of Vienna, Austria.

FRANZ NEUGEBAUER, M. D.,
Professor; Director of the Evangelical Hospital, Warsaw, Russia.

JULIUS SCHNITZLER, M. D.,
Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,
Berlin, Germany.

Address all communications to the INTERSTATE MEDICAL JOURNAL, LINMAR BLDG., ST. LOUIS, MO.

EDITORIAL COMMENT.

WILLIAM BEAUMONT.

Dr. William Osler, of Johns Hopkins University, Baltimore, will deliver a memorial address, "William Beaumont, the First and Greatest American Physiologist," under the auspices of the St. Louis Medical Society. The lecture takes place at the Odeon, on Saturday evening, October 4th, at eight o'clock.

The name of William Beaumont deserves high mention and great praise. As a man, as a physician, as an army surgeon and as an original investigator, it can truly be said that Beaumont accomplished more than any of his contemporaries and perhaps as much as any who have succeeded him. His notable experiments in the case of the young Canadian voyageur who received a gunshot wound of the stomach, which Beaumont kept open by the establishment of a fistula, were destined to give a rational comprehension of the process of digestion. Where before the time of the performance of these experiments, everything connected with the process of digestion was speculative, since then physicians have been able to obtain that perfect understanding of the process which Beaumont's pioneer researches and later close investigations of others made clear. Few of us appreciate the primitive researches of our forefathers in medicine, yet the scope of their works and the import of their discoveries can best be understood when we remember that these men were working in untrodden paths, with no literature to guide, but, on the contrary, with false conceptions to delude them. They deserve more credit for their work, handicapped as they were, than do the investigators of the present day, working as they do with the examples of many

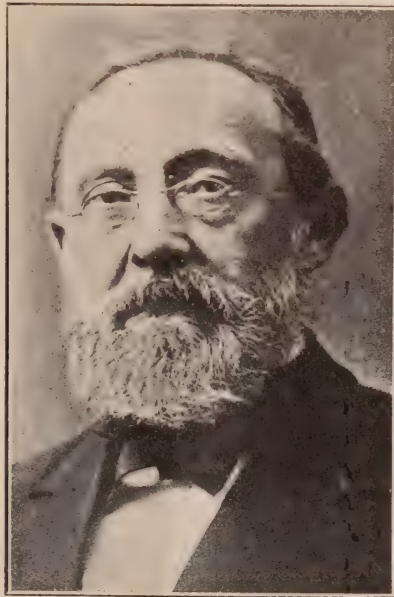
before them and with every advantage of literature, training and equipment. The experiments on digestion conducted by Beaumont were epoch-making. His diet table prepared from these investigations are classic to this day.

Beaumont's researches involved considerable expense and annoyance. Saint Martin was not an ideal clinical patient. The young voyageur continually tried to escape from the watchful eye of this pioneer physiologist. On several occasions it was necessary to bring him back from his native heath, whither he had flown to escape from the digestion experiments conducted by his master. Beaumont's fondest hope was to present his experimental subject before the physiologists of Europe, but unfortunately it was never consummated.

Beaumont was held in high esteem in St. Louis, where he practiced medicine for a number of years. He was beloved by his patients and held in high regard by his confreres. It is fitting that St. Louis should honor the memory of this distinguished man. Already we have a medical college bearing his name. Why should we not emulate the profession of Michigan who, in 1900, erected a monument to his memory at Mackinac Island, the place where his first experiments were conducted?

DEATH OF RUDOLPH VIRCHOW.

Rudolph Virchow has passed away, and with his death the world of science loses a master. Born of humble parents in a little town near Pomerania, he rose by his own efforts, or won, we may better state, in the face of the most



strenuous opposition, scientific and political, to the envied position which he has held for more than half a century. Who, knowing of his birth amid such humble circumstances, could have predicted the brilliancy of the recent celebration of that event? Who could have foreseen that not only the world of science but humanity in general would pause to do him honor on that occasion? Now the master of Orth Recklinghausen and Cohnheim is gone, and the world unites

with those who knew him and those who knew his works to mourn for him, who, in the widest sense, was a benefactor of all mankind. He has gone to join Du Bois Reymond and Helmholtz, and thus again are united these brilliant companions of early manhood. This gifted triumvirate is once more complete.

When Virchow's labors for mankind began more than a half century ago the conflicting authors of the humoral and solidar pathology held sway. It was he who first dared combat them both, and who can do more than point us in the right direction? But it was not sufficient for him to found pathology, he had to coin the terms in which to express it, and the exactitude with which he has always chosen and used his scientific terms has been not only a marvel, but a model for those who have come after. Others had made autopsies, indeed had brought out much of pathological anatomy, but for Virchow it remained to deduce the working principles of pathology. He extracted from the concrete facts the general principles on which a rational system of therapeutics must stand. He built in this way the bridge which must span the chasm between the dead and the living. He taught us to use for the good of mankind what we could see from the lifeless clay.

As writer, editor and teacher he did an almost incredible amount of work, but the crowning glory came when he raised himself to the position of father of modern medicine with the proclamation, *omnis cellula e cellula!* This alone was enough to have satisfied the ambition of one man. For this he must remain the guiding principle not only in pathology but all of medicine as well.

Virchow was not satisfied to be acknowledged the leader in the field of medical research alone, but distinguished himself as anthropologist, explorer, archeologist and statesman, having served both his state and country unswervingly year after year. Amid all this he never relaxed his labor until a few months ago, when accident laid him low, and amid intense suffering the fortitude he displayed more than equaled the energy which had characterized his work. It can hardly seem true in Virchow's case, as much as we have revered him, that he will only be appreciated now that he is gone; but, however this may be, he will never be forgotten, for not only the world of science, but humanity itself, as long as time will last, will honor his name.

PROSTATIC HYPERTROPHY.

From the laboratory study of pathological prostates, Greene and Brooks come to the conclusion that "prostatic hypertrophy of the aged is the result of chronic prostatitis," and "most frequently arises from chronic posterior urethritis, of whatever cause." This deduction is the result of such careful and intelligent investigation that it demands grave consideration; but without due clinical experimentation and proof, no laboratory result is complete. To this end may be specially noted the article elsewhere in the JOURNAL on the "Activity of Prostatic Hypertrophy," by Lydston, who from his vast clinical experience discusses the causes of the hypertrophy from the standpoint of a practitioner, and arrives at the same conclusions as Greene and Brooks. He says "careful rectal examination of men, from the age of twenty upwards, shows that a prostate which is perfectly normal in size, consistency and sensibility is the exception rather than the rule. This is true of the masturbator and sexual hypochondriac, as well as the individual who has had posterior urethritis, although the latter condition is, it must be confessed, a very frequent explanation."

This brings us to face with prophylaxis, and encourages the hope that treatment may be instituted which will relieve the prostatic inflammation before the hypertrophic stage comes on, rather than wait until the disease has reached its last period, with its prostatic engorgement and urinary retention, infection and urgency.

MYOPIA A DISEASE.

Although the ophthalmic surgeon is usually alive to his responsibilities in the presence of a case of myopia, it is a deplorable fact that the profession generally, as well as the spectacle venders, the shopkeepers and the laity, regard the condition as one which, after correction by appropriate concave spherical glasses, may thereafter be relegated to the limbo of "things accomplished," about which there is no necessity for further concern.

While it is true that many cases of myopia are practically stationary, it must not be forgotten that the majority of cases are truly "progressive"—*i. e.*, the anomaly increases in grade from year to year. Given a case of moderate myopia in a young person, it is not always possible to say, *a priori*, what the outcome will be. Every case is a law unto itself, and the careful physician will venture a prognosis only after having observed the course of the trouble over a period of years. It naturally follows that *all* myopes should be subjected to frequent examinations—say three or four times a year—with a view to differentiating the two classes. A rapid increase in the degree of the anomaly should excite the gravest apprehension as to the ultimate usefulness of the eye.

The conception of axial myopia as a disease may be better realized by contrasting the conditions which obtain in myopia with those which obtain in axial hypermetropia. In the latter, the shortness (relative to the refractive power of the media) of the antero-posterior axis of the globe is directly attributable to a congenital incomplete development of the posterior segment of the eyeball. In other words, the train of events leading to the formation of the hypermetropic eye has culminated before the birth of the child. In hypermetropia we are dealing, not with a diseased, but with an undeveloped eye. Careful measurements have shown that, practically without exception, the refractive condition in the infant's eye is hypermetropic, and the subsequent growth of the eye either reduces its hypermetropia or renders the refraction emmetropic.

Axial myopia, on the other hand, is the outcome of various extrinsic conditions encountered *post-partum*. The question as to the precise factors initiating the morbid process which results finally in a lengthening of the antero-posterior axis of the eyeball is still *sub judice*. It is highly probable that the determining factors will, in the last analysis, be found to be various and of diverse origin; in short, that any intra- or extra-ocular agents exerting an abnormal pressure or tension upon the ocular tunics will produce a deformation of the spherical globe, expressed by a prolongation of the antero-posterior axis. The myopic eye is, therefore, a deformed eye, whose original refractive condition was hypermetropic or emmetropic. That the condition is truly a pathologic one is evident from the gross changes in the fundus (choroidal atrophy, disseminated choroiditis, staphyloma posticum, etc.), visible with the ophthalmoscope.

GAS LEAKAGE AND THE PUBLIC HEALTH.

The sanitary agitation of the past few years, which has had for its object the betterment of the public health by improved sanitary arrangements, has been singularly neglectful of the conditions existing in our city homes as regards the leakage of gas. Medical men, too, have to a large extent ignored the possibility of the leakage of gas affecting the health of the community. Two original communications in the *New York Medical Journal* for August 23, 1902, the one by a competent engineer and gas expert, the other by a well-known specialist of New York, deal with this subject and point out how great the gas leakage actually is, and how some cases of anemia and general impairment in health can be produced by inhalation of the leaking gas. James C. Bayles states that over eight millions of cubic feet of gas escape per day from the gas mains in the city of New York. Glasgow, Scotland, has the greatest recorded leakage in Great Britain—1,643,207 cubic feet to the mile. He states that there is an alarming amount of gas leakage in every city in which gas is used. The paving of streets and sidewalks prevents the escape of this gas upwards, and hence it filters through into the basements and cellars, and thence into the rooms of dwellings. Part of it reaches the sewers and forms a component part of the indefinable substance commonly called "sewer gas." It is higher in carbon monoxide, being parallel in composition to the uncarburetted water gas—a most harmful form of gas. The gas which reaches houses from leaks occurring outside the foundation walls is really very much more dangerous than that which escapes from the service pipes and fixtures. It is higher in carbon monoxide, having returned to about the composition of uncarburetted water gas. The additions of the carburetting process are all taken out by filtration through the soil, and as these are the odor-imparting constituents of illuminating gas that filtered is inodorous, and hence more of a menace to health.

With the facts concerning the enormous amount of leakage obtained from engineering talent, we have actual cases on record where a train of symptoms due to the inhalation of escaped gas were made to disappear simply by changing residence. Samuel Lloyd reports a number of such cases. The symptoms consisted in fever, skin pallor, loss of strength and energy, constipation and general wasting away, without any organic lesions. Blood examinations showed a condition of anemia. Change of abode led to immediate improvement and cure.

It would seem that this matter of gas leakage is of sufficient importance in larger cities to interest health officials, and where the evil exists to the extent of endangering health the gas companies should be compelled to protect the public. It is manifest that the company will not take any such steps voluntarily, as the cost of repairing the leaking pipes is far in excess of the loss sustained by the corporation in the escaping gas.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

Statistics on Carcinoma from the Standpoint of Pathological Anatomy.—RIECHELMAN, Berlin (*Berliner Klinische Wochenschrift*, Nos. 31 and 32, 1902), reviews in detail the statistics of carcinoma collected from the autopsy room. A comparison with the clinical data shows that the diagnosis of carcinoma is increased by almost twenty-two per cent. in the post-mortem room. The increasing frequency of carcinoma is, in part, attributed to the increased number of people who reach the age in which carcinoma is apt to occur; in part to the improved methods of diagnosis, and in part to the advent of the anatomical diagnosis into the statistics. It must yet be proven that there is really an absolute increase of carcinoma.

The poor nutrition and cachexia of carcinoma is due (1) to the interference with the digestion and the assimilation of the food; (2) to the ulceration and necrosis of the tumor, (3) and to the number and position of metastases.

Observations Concerning the Agglutination of the Pest Bacillus.—AUJESKY and WENHARDT, Budapest (*Berliner Klinische Wochenschrift*, No. 32, 1902), conducted experiments with reference to the agglutination of the pest bacilli, in order to determine the practicability of this test as a diagnostic aid. Experiments were made with the serum from the horse, from healthy individuals, tuberculous patients, from individuals treated with pest serum, from the rabbit before and after injections of pest serum, etc., etc.

The following conclusions were arrived at:

The serum from healthy horses will cause an agglutination of the pest bacilli, if not diluted more than 1:10.

The pest serum in greater concentration than 1:5 causes an agglutination not only of the pest bacilli, but also of other bacteria.

The blood of healthy persons, and those suffering from tuberculosis, does not result in agglutination.

After immunization with pest serum, the blood of human beings sometimes acquires the power of agglutination.

The serum from healthy rabbits causes no reaction; the serum from rabbits immunized with pest serum invariably results in agglutination.

The urine of healthy persons causes no reaction, but after the injection of pest serum it may cause agglutination.

Blood serum of the rabbit does not cause agglutination, even after "Haffkinization" of the pest bacilli.

It was also demonstrated that the Haffkine serum may be used in the agglutination test, but that the reaction is more pronounced with the living bacilli.

The Leucocyte Count in Hanot's Disease (Hypertrophic Cirrhosis of the Liver, with Icterus.—KIRIKOW and KOROBKOW (*St. Petersburger Medicinische Wochenschrift*, Nos. 29 and 30, 1902) in six cases of Hanot's disease found hyperleucocytosis but once. This case was complicated by tuberculosis of the lungs. The leucocyte counts varied from 9,800 to 15,600.

In five cases there was hypoleucocytosis, with the following averages: 6,860

in 14 determinations, 3,970 in 12 determinations, 1,590 in 12 examinations, 2,410 in one determination, 6,290 in 15 determinations: In two of these cases the number of leucocytes frequently approached the normal.

The increase of the leucocytes after eating was irregular and not marked. This seemed to be in no way dependent upon the digestive process.

A moderate increase of the leucocytes was constant following spermin injections. In a child this was decidedly greater than that following the ingestion of food. The leucocytes were, on the whole, decreased in this disease.

Out of seventeen cases of the author's, and others in the same clinic, twelve showed hypoleucocytosis and ortholeucocytosis, and only five true hyperleucocytosis. The hyperleucocytosis points to a young affection, or a more acute course, to complications, to accompanying diseases, or to the development of a severe icterus.

The number of leucocytes is not proportionate to the erythrocytes or the hemoglobin. The process of leucocytosis in Hanot's disease, in all probability, is dependent upon the lymphatic and blood-building organs, perhaps to the spleen alone.

The erythrocytes and the hemoglobin are usually diminished. In four cases the average in four determinations was 3,412,000; in five examinations, 4,760,000, etc. The corresponding averages of the hemoglobin were sixty per cent. in five determinations, eighty per cent. in six determinations, etc. The relative leucocytosis in four cases with hypoleucocytosis was as 1:497, 1:1200, 1:2018, and 1:613 in a child.

Subcutaneous Injections of Arsenic in the Treatment of Phthisis.—CYBULSKI (*Muencheener Medicinische Wochenschrift*, No. 33, 1902).—Prompted by the fact that the physicians of ancient times used arsenic in the treatment of tuberculosis, the author tried it in a series of ten cases. Cases were chosen in which the disease had not made too great headway. A one per cent. solution of the arsenite of sodium in a half per cent. solution of carbolic acid was used in slowly increasing doses.

As a result of his investigations, he concludes as follows:

Arsenic acid acts favorably upon the temperature, reducing it promptly, but not permanently. This cannot be attributed to the phenol, because the dose is too small.

The weight increases under this treatment, though not rapidly. The appetite is improved, but not in the same degree as when the arsenic is taken by the mouth. In the latter case the arsenic no doubt exerts a direct action upon the mucous membrane of the stomach.

The subjective condition of the patients was always improved by the injections.

The intestinal tract was in no way affected. The diarrhea so commonly noted in the external use of arsenic did not occur here.

Favorable influence upon the perspiration was frequently seen. There was at no time an irritation of the kidneys resulting from this treatment. Albumins were not found in the urine.

Influence upon the heart's action was not noticed. The diminution of the pulse-rate was always due to the reduction of the temperature.

The treatment seemed to exert no influence whatever over the processes going on in the lungs.

Blood Pressure in Basedow's Disease.—SPIETHOFF (*Centralblatt fuer Innere Medicin*, No. 34, 1902).—But little work has been done in the determination of the blood pressure in Basedow's disease. The author finds but two articles in the literature on this subject: the one maintaining that the blood pressure is normal; the other that it is increased.

This report includes tables obtained from the records of some twenty cases, and leads to the following conclusions: The blood pressure in morbus Basedow is not constant in any one direction. Neither is the belief correct that the blood pressure in Basedow's disease is always increased, nor, on the other hand, that it is always diminished.

In the severer forms there are both rises and falls of the blood pressure, while in the less severe forms the pressure remains normal. At this time an explanation of the phenomenon is not possible.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

The Influence of Arterial Hyperemia Upon Regeneration.—LIEK (*Archiv fuer Klinische Chirurgie*, Bd. lxxvii, Hft. 2).—In order to prove this principle, the author made section of the sympathetic on one side of the neck, after making a similar defect on each of a rabbit's ears; of course there was at once a pronounced hyperemia on one side, while the other was not thus affected. In one set of rabbits the defect was only skin deep; in these the healing was much more rapid on the hyperemic side, without exception. However, it must be noted that the vaso-motor paralysis which supervenes upon the original hyperemia does not, after the lapse of a certain length of time, have a beneficial effect upon healing. In order to eliminate all errors the author used in further experiments pairs of similar animals, making the defect in the left ear of each and cutting the sympathetic of but one; here, too, the same result was obtained, viz.: healing was much more rapid on the side upon which the nerve had been cut. It was further proven that the left ear does not heal more rapidly than the right, so there can be no doubt of the results.

Another series of similar experiments was undertaken to show that this rule holds equally good in *penetrating* defects of the ear, and identically the same results were obtained.

It will be readily seen that the principle is one of value, and the care with which the matter has been worked, as well as the amount of work involved in making the experiments, can only be appreciated by one who has read the article in the original.

A New Method in Pyloroplasty.—FINNEY (*Bulletin of the Johns Hopkins Hospital*, July, 1902).—The author admits that the weight of authority is in favor of gastro-enterostomy as a remedial measure for benign strictures about the pylorus, but still claims much for pyloroplasty, since no one can deny that the other method of operating is attended in the best hands with the dreaded "circulus vitiosus" now and then. The method here proposed is in a sense a modification of the lateral anastomosis of Halsted, though improved, it must be said, by a suture through the mucous membrane. After liberating the duodenum and stomach from the adhesions which are usually found, they are sewn together, thus kinking the pylorus; now the anterior row of Halsted stitches are introduced, and before being tied, a cut in the form of an inverted "U" is made through the pylorus running from the anterior surface of the stomach onto the duodenum.

The author has carried out his method upon the living in five cases, with markedly brilliant results, and says in closing that it combines more good points and less objectionable ones than any other method of pyloroplasty. The article

must be read in the original to be fully appreciated, since a number of cuts serve to elucidate the technique.

The Injection of Paraffin in Deformities of the Nose.—BARATOUX (*Le Progres Medical*, May 17, 1902).—The article opens with a statement of the many parts of the body in which paraffin has thus been used. It may be added by way of warning that various embolisms have occurred during the use of this substance. The authors are divided in their opinion as to the ultimate of the paraffin injected; some think that it remains at the original site, while others think it is re-sorbed little by little. It is, however, certain that a capsule of connective tissue forms around the paraffin soon after the injection. The paper next takes up in detail the technique involved, while four cuts illustrate some of the results which the author has accomplished. He has had experience with thirteen cases, and not a single accident has complicated the work.

Angiotripsy as a Substitute for the Ligature in Routine Work of General Surgery.—MAYER (*Annals of Surgery*, August, 1902).—The author asserts that what he accomplishes is "forcible compression" of the blood vessels, lasting in its effects, and doing away with the loss of time incident upon a ligation, as well as obviating the danger of an infection from a contaminated ligature. He exerts a pressure of one thousand pounds upon the tissue by applying a heavy compression forceps to the hemostat which has been clamped upon it. To avoid lacerating the tissues, he advises the use of a hemostat which has serrations upon only one lip, the other being formed of a soft alloy.

Sections through vessels which have been subjected to such treatment show that the inner and middle coats recoil, while the outer is firmly compressed and the lumen sealed. The hemostat is to be placed squarely on the vessel and left a short time after the pressure has been applied. In experiments on the dog and sheep, arteries of the size of the radial and femoral have been successfully treated thus, a sufficient guarantee that the method is worthy of imitation on the human; a thing which has been done with success, as will be presently shown.

Pain is supposed to be less after this treatment than after ligation, for the reason that the nerves are crushed completely instead of sometimes being caught in a ligature. The author has done various amputations, taken off the breast, dissected the neck, etc., etc., without the use of a single ligature, certainly a sufficient proof of the worth of the method. The same idea, it must be said, was published in Germany long before the appearance of the paper under discussion.

On the Use of the Abdominal Route for Approaching Rectal Tumors.—ABBE (*Annals of Surgery*, August, 1902).—This route is to be preferred or combined with one of the others in the treatment of tumors which reach above the peritoneal fold, in many of the lower ones it is not necessary. However, in all cases we gain a satisfactory idea of the lymphatic condition only when the belly is wide open. By the author's method he is enabled to make a sort of pedicle out of the vessels which supply the rectum, after having divided the gut above and below the tumor; of course it is then a comparatively bloodless matter to remove the mass. In general he prefers a permanent artificial anus to any attempt to reunite the divided gut. This is in direct contradistinction to the most recent expressions of the masters of the old world in this line, many of them speaking from an experience of more than a hundred cases. This applies rather to the German than to the French writers, it must be said. Abbe would make his artificial anus at the time of the major operation, it being of course unnecessary to make it beforehand.

The Use of Gauze Veils in Aseptic Operations.—WENZEL (*Centralblatt fuer Chirurgie*, No. 19, 1902).—It is little short of ludicrous to note how the Witzel

clinic came to use this simple device; for some time they had made use of the cumbersome Mikulicz mask for operator and male assistants, but had been unable to find anything that would fit the garb of the "sisters," who handed sponges, etc., until some one hit upon the idea of using a veil made of several folds of gauze. This was seen to be at once a simple and comfortable way of covering the head, so it was adopted by every one in the operating room. The author mentions the ease with which air can pass through such a covering, noting at the same time that all particles of moisture are held back by three layers. Especial attention is paid to persons with full beards, but no mention made of the fact that ordinary sanitary considerations make the wearing of such an appendage little short of a crime in a surgeon.

It has long been the custom in one of the St. Louis hospitals, with which the reviewer is familiar, to use just such veils as described by Welzel, but no one ever thought that there was anything so unusual about the procedure as warrant the taking of photographs and the writing of a serious article on the subject. What more natural way could there be of covering the face? It must have occurred to any number of surgeons to make use of it.

Intestinal Obstruction from Meckel's Diverticulum.—HALSTEAD (*Western Medical Review*, vol. vii, No. 8).—The patient, whose history forms the subject of this sketch, was operated upon in the night, after suffering for some days with obstructive symptoms; he made a splendid recovery, the bowels moving normally the day after the surgical procedure.

After describing his case, the author takes up the history and embryology of the diverticulum. Next a lengthy description is given of the many ways in which this organ may cause obstruction of the bowel; certainly a most instructive chapter, and one which shows no little research.

Halstead has collected the histories of sixty-nine of these cases, and finds that the mortality has been 68.1 per cent.; of these fifty-seven were subjected to operation, and of this number, thirty-two died, giving a mortality of 59 per cent. In view of the statistics, the author is to be congratulated upon his success in the case above cited.

Two Cases of Cervico-Facial Actinomycosis.—THEVENOT (*Gazette des Hopitaux*, No. 73, 1902).—These two cases which occurred in Lyons present such typical pictures that the author considers them worthy of reproduction here. The first is that of a young woman in whom the disease attacked the tissues in the tempero maxillary region. It was supposed that the infection occurred through a diseased tube, and on account of the lesion being tubes the surgeon refrained from operative treatment. However, with the administration of iodide of potassium the patient so far recovered at the expiration of a few weeks that she was able to return home and resume her household duties, although not fully recovered.

Excellent cuts render the appearance of this, as well as the case described below, much clearer than any written description can.

CASE 2.—The disease here attacked the anterior portion of the neck in the hyoid region of the left side, and spread secondarily extensively through the skin of the neck. The enlargement has a woody feel, presents very small openings through which a sero-purulent fluid exudes, and in this latter swim many of the characteristic green granules—in fact, the picture here was so clear that the diagnosis was fully established before the employment of any laboratory methods by way of treatment. The lesion was liberally incised, whereupon the patient was so far improved under the influence of iodide of potassium that he was dismissed from the hospital at the end of a few weeks with a very small cavity.

In referring to the diagnosis in such cases the author states that the odor is so far characteristic as to aid greatly in determining the nature of the disease.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

The Treatment of Exophthalmic Goitre by Means of Antithyreoidin.—SCHULTES (*Munchener Med. Wochenschrift*, 1902, No. 20).—There is reason to suppose that the function of the normal thyroid gland is the secretion of a juice whose province it is to neutralize and render inert a poisonous substance produced somewhere in the body and circulating in the blood. Where the thyroid is inactive, or has been extirpated, this poisonous substance circulates unneutralized and produces the condition known as myxedema. Believing that in exophthalmic goitre we have an excessive activity of the thyroid gland, and a hypersecretion of the above mentioned juice, attempts have been made to throw into the circulation of such patients more of the unknown substance which it is the province of the thyroid juice to neutralize. Led by this theory, Ballet and Enriquez injected the serum of thyroidectomized dogs into the circulation of patients with exophthalmic goitre. Burghardt used the blood of myxoedematous individuals, while Lanz advised the drinking of milk obtained from thyroidectomized goats. Finally, Moebius has urged the use of his antithyreoidin, a serum obtained from the blood of sheep that have been deprived of their thyroids. Dr. Schultes, of the Sanitarium Illenau, reports a case of exophthalmic goitre treated with this antithyreoidin, as follows:

The patient, a woman, forty-nine years old, began four years ago to suffer from cardiac palpitation, soon followed by exophthalmus and struma. During the past three months the above symptoms have grown much worse, and a severe tremor of the hands has appeared. Recently psychical changes were observed, and December 12, 1901, a violent acute psychosis forced the removal of the patient to Dr. Schultes' sanitarium. The patient was confused, had vivid hallucinations, forced movements, clouded sensorium, rapid change of moods, etc. Nine days later the serum treatment was begun. On the first day she received 0.5 g. three times daily; the dose was increased 0.5 g. every day. The serum was given by mouth, at first in sherry, later in raspberry juice. Eight days later the patient was more quiet and the cardiac action less frequent, while on the fifteenth day she was psychically much improved. On the twenty-fourth day (thirty-three days after the beginning of the psychosis) her consciousness was clear; she was cheerful, had no subjective distress of any sort, no palpitation, pulse quieter. Even the neck had grown smaller. Six days later the pulse was still slower and the neck smaller, the thyroid had grown soft, the tremor had disappeared. When, however, the administration of the serum was stopped, both pulse-rate and struma increased once more. The serum was again given (2 g. t. i. d.), whereupon the pulse became quiet and the thyroid smaller; one week later the patient was discharged cured.

A single case like the above does not of course permit a final judgment as to the efficiency of the serum in this disease. Nevertheless the psychosis, which clearly belongs to the type of acute mania, was evidently and rapidly benefited by the treatment. When a psychosis of such severity, which usually persists for months, is cured within four weeks, and when at the same time the other accompanying disturbances are entirely cured, we have good reason to infer that the serum itself neutralizes or causes the rapid elimination of whatever has produced the disturbance. Hand in hand with the subjective improvement there appeared a softening and diminution of the goitre, an improvement in the cardiac action, a disappearance of the tremor; the exophthalmus alone remained uninfluenced. The serum is worthy of further trial. Unfortunately its cost is still excessive.

Treatment of Hemorrhoids.—THIELE (*Deutsche Med. Wochenschrift*, 1902, No. 22).—Some years ago, Tillmanns advised the injection into hemorrhoids of carbolic acid. Thiele has found the following modification very efficient in a considerable number of cases: The patient is given a cleansing enema, and is asked to press out the hemorrhoids. The anal region is then washed with soap and ether, and finally with a milky antiseptic solution. A hypodermic syringe is filled with a solution consisting of one part pure carbolic acid and two of glycerine. Into the smaller nodules one to two minims are injected, into the larger ones, three to five. Before puncturing a hemorrhoid it is important to make sure that none of the carbolic acid mixture is clinging to the outside of the needle; otherwise necrosis of the mucous membrane may take place. Large hemorrhoids may be injected in two or more places. After-treatment: Rest in bed for two or three days; liquid diet; if necessary, cocaine suppositories or small doses of opium.

Yohimbin (Spiegel) Impotence.—EULENBURG (*Deutsche Med. Wochenschrift*, 1902, No. 22).—Most cases of neurasthenic impotence react very favorably to yohimbin administered by mouth. Very obstinate cases may be treated with benefit by means of subcutaneous injections of the drug, sometimes with marked, always with some, benefit. He uses a two per cent. solution in distilled water, of which but little should be put up at a time, and which must be kept in bottles of dark glass. At first half a syringeful (= 0.01 yohimbin) is injected daily, usually in the inner aspect of the thigh; the dose gradually rises to 1 g. (= 0.02 yohimbin). At first the injections are given daily; after the effects begin to show themselves, they are given only every two or three days. After twenty injections have been given, the use of the drug should be stopped for some time. Eulenburg's success with yohimbin has been so striking that he considers all other medication superfluous in neurasthenic impotence.

Selected Prescriptions (*International Clinics*, xii, vol. 2).—The second volume of this year's *International Clinics* contains, among many others, the following useful prescriptions:

In the persistent diarrhea of advanced tuberculosis, the following prescription is said to give good results where other means have failed:

R	Iechthoformi	3 ss
	Tannalbin,	
	Bismuth subgall	aa 3 j
	Codeinæ	gr. iss
	Ol. menth. pip	m iss
M.	et divid. in chart. No. vj. Sig.—One powder every three to six hours, according to indications.	

For the cases of chronic bronchial catarrh in the old, which are quite as apt to prove annoying in the summer as well as in the winter, Dr. Burney Yeo recommends the following combination:

R	Ammon. carbonatis,	
	Sodii bicarb	aa gr. xl
	Tinct. opii camp.	fl. 3 iv
	Spt. chlorof	fl. 3 iss
	Infusi senegæ	q. s. ad fl. 3 viij
M.	Sig.—Two tablespoonfuls every five or six hours in hot water.	

The water should be used as hot as it can be borne, since if given in luke warm water the mixture will produce vomiting.

Prof. George Dock, of Ann Arbor, recommends the following prescription for acute rheumatism:

℞ Sodii salicylat.,
Sodii carbonat. aa 3 ij
Aq. camphoræ q. s. ad fl. 3 vj
M. Sig.—One tablespoonful in water every hour.

In muscular rheumatism the salicylates are seldom of any benefit. Gentle rubbing and mild counter-irritation are always indicated. The following formula has given great satisfaction in French hospitals:

℞ Spt. camphoræ fl. 3 iss
Spt. terebinth fl. 3 iss
Chloroformi fl. 3 ij
Menthol 3 j
Bals. Peru fl. 3 iss
M. Sig.—Apply with gentle friction.

So many proprietary preparations to be used as mouth-washes are on the market, and are being pushed so sedulously on the physician's attention, that most doctors will be glad to be able to prescribe an efficient mouth-wash without the necessity of having recourse to some much-advertised preparation. The following is from *Merck's Report*, and is both antiseptic and palatable:

℞ Formalin m v
Tinct. benzoini fl. 3 iij
Tinct. myrrhæ fl. 3 j
Ol. menth. pip. m iij
Ol. anisi m ij
Ol. cassiæ m j
Ol. cinnamomi m xv
Alcoholis fl. 3 ij
M. Sig.—Use as mouth-wash once or twice daily.

A New Apparatus for Dry Cupping.—RUBINSTEIN (*Therap. Monatsh.*, 1902, No. 6).—A new cupping glass has laterally a tube provided with a stop-cock and connected with an aspirator. The cup is applied and the air exhausted by means of the aspirator. The stop-cock is then closed and the aspirator taken off. Among other advantages, the danger of burning the skin is avoided. The apparatus may be had of Windler, in Berlin.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

Anti-Staphylococcic Serum.—DOYEN (*Le Progres Medical*, August 2, 1902).—Doyen presented before the Academy of Medicine of Paris a new anti-staphylococcic serum. It is an albuminous fluid, which causes cessation of pain and swelling within a few hours after injection (dosage of 5 to 10 c.cm.). Doyen compares its rapid action to that of the anti-diphtheritic serum. Doyen cited cases in great number of cures and amelioration of symptoms, furuncles, anthrax infection (?), staphylococcic angina, broncho-pneumonia, osteomyelitis, and in general all infections where the staphylococcus predominates over other bacteria present. He claims that in cases of diphtheria complicated with a staphylococcus infection, the results have been very good.

Nothing is stated concerning the method of preparation or the separation of the toxins, etc.

A Simple Form of Monochromatic Illuminator for the Microscope.—A. M. EDWARDS (*American Monthly Microscopical Journal*, June, 1902).—Edwards describes a cheap and effective method of making a monochromatic illuminator for the use of the microscopist. A vial is taken which has flat sides. Such a vial is extremely common, and can be obtained from any pharmacist. Use a vial of about two ounces capacity. The bottle is filled with water containing any aniline blue. Put it between the source of light (sunlight or gaslight) and the microscope mirror. The most difficult object, as the *hyalodiscus subtilis* or even *Suriella gemma*, seems to start out when thus viewed.

Transplantation of Tumors.—LEO LOEB (*Journal of Medical Research*, June, 1902).—Loeb reports a series of interesting experiments on the transplantation of tumors in rats. He found that sarcomata in different rats showed some structural differences based on differences in the cells, on differences in the formations of fibers and in the degeneration processes which take place. These differences were present, and were reproduced throughout the transplantations. Many peripheral sarcoma cells remain alive during the first few days after transplantation, and they mix with the surrounding connective tissue cells. It is very probable that these peripheral sarcoma cells give rise to the tumors after transplantation. The growing sarcoma has the power of penetrating into the central necrotic part of the transplanted piece, which becomes liquefied under the influence of proteolytic ferments. Also necrotic tumor tissue around thrombotic blood vessels becomes dissolved. In both series of transplantations which Loeb worked out, pieces of tumor which were infected at the time of the operation frequently gave rise to the growth of sarcomata. Local conditions determine in some measure the fate of a tumor. In one series, secondary nodules were frequently formed if ulceration in some part of the tumor had taken place. A series of experiments was undertaken to determine how long pieces cut from tumors could be kept on ice, and yet develop sarcomata after transplantation. Pieces kept on ice for one, two and five days developed in each case several tumors.

Experiments on the influence of the Roentgen rays were begun. After seven exposures of ten minutes each the sarcoma cells continued to multiply by mitosis. In the center of the tumors, degenerative softening was present.

Mast cells present in the tumor were successfully transplanted. Their later fate depended on the fate of the transplanted tumor. Where the glands remained alive, the mast cells also remained alive and underwent similar variations in the number of their granules as the mast cells of the original tumor.

On Tumor Transplantation and Inoculation.—M. HERZOG (*Journal of Medical Research*, June, 1902).—Herzog tried a number of experiments on the transplantation of tumors into rats. He states that he has never succeeded in reproducing carcinomata or sarcomata in rabbits or guinea-pigs by the injection of triturated or filtered human material, subcutaneously, intra-peritoneally or into the anterior chamber of the eye. He denies the finding of Mayet (*Gaz. Hebd. de Med. et de Chir.*, January 19, 1902), who claims to have reproduced carcinoma in white rats by the injection of a glycerin extract of human aseptically macerated cancer tissue.

Herzog had more success with the injection of sarcomatous material originally from a white rat (a descendant of the same animal used by Loeb, whose paper is abstracted above). Of seventy or eighty transplantations made, all except fifteen were successful. Sometimes the implanted tissue led rapidly to the formation of a large tumor, so that one of the size of a large walnut or a

small apple had been formed in from four to five weeks. Inoculations made from non-infected tumors on the usual culture media were always negative. Attempts to transplant or inoculate the tumors to rabbits were negative. Experiments made with a view of producing a tumor from absolutely cell-free substances derived from the sarcomata were uniformly unsuccessful. These experiments were made with a germ-free emulsion of the tumor, and also with fluid obtained through the agency of collodion sacs, which had been transplanted either with a fresh piece of tumor into an animal or else by directly placing the sac within a tumor mass in the animals. No cultures were developed from the fluid obtained through the medium of collodion sacs, nor have any of the rats so treated developed a tumor.

New and Simple Media for the Differentiation of the Colonies of the Typhoid, Colon and Allied Bacilli.—PHILIP HANSON HISS (*The Journal of Medical Research*, June, 1902).—Hiss's interesting paper represents the continuation of his well-known researches on semi-solid media for the differentiation of the typhoid and colon bacilli, which appeared in the *Journal of Experimental Medicine*, 1897, Vol. 2, No. 6. At that time he gave the formulæ for two media, the one a plate medium and the other a tube medium, in which he claimed typhoid and colon bacilli grew characteristically. These media, as the editor can state from personal experience, were quite difficult to make, owing to the delicate reaction, etc. To overcome this disadvantage, Hiss tried a number of different media without regard to the reaction, and arrived at the conclusion that a medium of the following composition would suffice as a method of differentiating the typhoid from the colon and other similarly-appearing bacilli: agar, fifteen grammes; gelatin, fifteen grammes; Liebig's extract of meat, five grammes; sodium chloride, five grammes; dextrose, ten grammes, one thousand cubic centimeters of distilled water. This is cleared by the addition and coagulation of the whites of two eggs, and filtered through absorbent cotton. Its reaction is usually about one and two-tenths per cent. acid, and no acid or alkali need be added. On this medium the typhoid bacillus grows in irregular-shaped colonies with the formation of threads; the colon colonies remain more regular, and there are no threads. The medium used for tube cultures consists of agar, five grammes; gelatin, eighty grammes; Liebig's extract of meat, five grammes; sodium chloride, five grammes; dextrose, ten grammes; distilled water, one thousand cubic centimeters. It is cleared with the addition and coagulation of the whites of two eggs, and its reaction should be one and one-tenth per cent. acid. In a tube of this semi-solid medium, the typhoid bacillus produces uniform turbidity at 37° C. in eighteen hours. The colon cultures do not give uniform clouding, and besides form gas.

Typhoid bacilli, in this way, can be differentiated physiologically from the colon bacillus and most allied forms. Hiss states that his media are useful in separating typhoid bacilli from urine and feces. He has used the various modifications of this method for two years, and comes to the conclusion that the formulæ given above are of the greatest utility in working with these closely-resembling species. Experimentally, he easily separated the bacillus dysenteriae from the typhoid bacillus by the use of this method. He claims that the Gaertner group, represented by the Gaertner bacillus enteridis, as well as the para-colon group, the bacillus typhi murium, the bacillus psittacosis, the bacillus icteroides (Sanarelli) and the aerogenes group can easily be identified by this method.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

On Puerperal Aphasia, with an Analysis of Eighteen Cases.—M. A. MCINTYRE SINCLAIR (*Lancet*, July 26, 1902).—The author includes in this paper, under the term of puerperal aphasia, also cases of aphasia occurring during the latter months of pregnancy. In his opinion, there is one factor commonly underlying both forms, namely: the altered condition of the maternal blood for a certain period before and after delivery, and the greater tendency of the blood at this time to undergo clotting within the vessels. The writer observed the following case: A woman, aged twenty-seven years, with no evidence of cardiac or vascular disease, was in the latter half of the seventh month of her fourth pregnancy suddenly affected with total loss of speech, which lasted for about an hour. Later in the same forenoon she had a second very transitory loss of speech. At 3 P. M. of the same day, embarrassment of speech again manifested itself. At 9 P. M. the attack culminated in total loss of speech for the third time. The next forenoon the author found the patient in a condition of complete motor-aphasia without agraphia. She could not articulate the simplest words. The next day a distinct paresis with loss of sensation was detected in the right upper extremity. Speech returned slowly from about the third day after the attack. Coincidentally with the improvement in speech the numbness and paresis of the right upper extremity disappeared. Ten weeks later she was confined of a healthy, full-term child.

Based upon a study of seventeen similar cases recorded in literature, the author arrives at the following conclusions: The main causes for puerperal aphasia are those of nervous and those of vascular origin. While Poupon, a French writer, who dealt with the subject extensively, has laid much stress on the nervous causes, Sinclair is inclined to regard cerebral thrombosis as the more prominent factor in the production of this affection. The prognosis of puerperal aphasia is generally good. A recurrent attack, however, is a serious matter and its prognosis grave. In order to avoid a recurrence, Poupon advised avoidance of further impregnation. Sinclair in this paper goes so far as to recommend interruption of pregnancy at the earliest possible moment in every patient who had symptoms of aphasia during preceding pregnancy. The treatment of puerperal aphasia depends to a great extent on the nature of the lesion, and the attack must be dealt with on the same lines as guide us in the treatment of any cerebral affection.

Prognosis and Treatment of Criminal Abortion.—MAYGRIER (*L'Obstetrique*, July 4, 1902; rev. *J. A. M. A.*, August 23, 1902).—The writer states that he has observed six hundred and ninety-eight cases of abortion supposed to be spontaneous. Four of the women died, that is, 0.57 per cent. During the same period he had occasion to treat forty-four cases of criminal abortion and the mortality was 56.8 per cent., that is, only nineteen women recovered. He concludes from his experience that in presence of an complete or incomplete abortion, due unmistakably to mechanical measures, or even when such abortive measures are suspected, and in absence of any complication, early evacuation of the uterus is required. If septic accidents have already developed, evacuation is still more urgent and general measures are also indicated. The contents of the uterus should be removed with the fingers. If the curette is necessary it should always be guided by the finger, as the walls of the uterus are softened by the fact of the infection. Terminate by swabbing with feathers as recommended by Budin and tamponing with iodoform gauze. The essential point is the promptness of the intervention, before manifestations of infection have time to develop.

A Note on the Life and Vitality of Spermatozoa.—ROSTER (*Boll. de Soc. Tosc. di Ostet. e Ginec.*; rev. *Journ. of Obst. and Gyn. of Brit. Emp.*, August, 1902).—The writer has made a number of observations upon the life of spermatozoa in the human vagina, and upon their ultimate fate. He concludes that they progress toward the ovum by the active motion of their tails, and by chemiotrophic stimulation set up by the alkaline mucus in the vagina. He finds that their life is much longer in the cervical canal than in the vagina, and that coition sets up in the cervix uteri a very active emigration of leucocytes which aid in the destruction of the spermatozoa. In his observations he frequently saw the heads of spermatozoa and complete spermatozoa in leucocytes or in cells of squamous epithelium.

Appendicitis or Torsion of an Ovarian Cyst.—P. BOTHEZAT (*Revista de Uclir.*, 1901, No. 6; rev. *Centralbl. f. Gyn.*, 1902, No. 30).—The author deals with various pathologic conditions which may be mistaken for appendicitis, such as circumscribed peritonitis, tumors of periappendicular lymph-glands, epiploitis in the region of the cecum, inflammations of the uterine appendages, torsion of a hydrosalpinx or ovarian cyst, etc. In a case of his own, concerning a girl of thirteen, post-mortem revealed torsion of a dermoid cyst with beginning gangrene instead of an appendicitis, suspected as the cause of death. The writer cites from literature two similar cases in which operation has been performed successfully. From a careful study of the literature the author concludes that there are no symptoms which would insure the correct diagnosis in every case of this kind, but the history, the condition of the tumor, and a careful examination both through vagina and rectum should arouse the suspicion of the physician, lest he might be concerned with something other than a simple inflammation of the appendix. Only early operation offers a chance of recovery.

A Suggestion for the Treatment of Enuresis in the Female.—G. C. PARNELL (*Brit. Med. Journal*, January 11, 1902).—The treatment advocated by the writer is the application of a strong solution of silver nitrate (five to ten per cent.) to the neck of the bladder and the urethra. The utility of this treatment was thoroughly tested by the author, and the results would seem to encourage a wider exploration of this simple application.

On the Formation of Hematocoeles.—O. BUSSE (*Monatschr. fuer Geb. und Gyn.*, July, 1900).—What leads in cases of ectopic pregnancy to the formation of a hematocoele is the question dealt with by the writer. The experience at post-mortem examinations, made shortly after intra-abdominal operations have been performed, and experiments carried out in animals, have conclusively shown that the normal peritoneum is capable of resorbing speedily a considerable amount of fresh blood. The lack of resorption—*i. e.*, the formation of a hematocoele in ectopic pregnancy—is, in the opinion of the author, due to the following two causes: First, the blood entering the abdominal cavity is not liquid, but coagulated and mixed with shreds of tissue coming from the tubal contents; secondly, the peritoneum has lost its resorptive power on account of inflammatory processes, which, as a rule, precede the development of an ectopic pregnancy.

Ovarian Pregnancy, with Report of a Case.—JOHN F. THOMPSON (*American Gynecology*, July, 1902).—The writer reports an unimpeachable case of an ovarian pregnancy. The specimen removed per laparotomy consists of the left tube and the left ovary. The ovary is somewhat enlarged and presents on the inner and upper border a red tumor of about the size of a horse-chestnut. The unruptured tumor contains a fetus, 1.2 cm. long, and along its inner wall a layer of tissue, which, under the microscope, is found to be typical chorion. Microscopical examination of the tube is negative, neither decidua nor traces of villi can be detected.

ORTHOPEDICS.

IN CHARGE OF

MALVERN B. CLOPTON, M. D.

The Treatment of Lumbar Spinal Abscesses.—JAS. K. YOUNG (*Internat. Med. Mag.*, July, 1902).—Those abscesses to the outer side of the erector spinae only need opening or aspiration. In the internal lumbar abscess which fills the iliac fossa the opening should be made by careful dissection a half inch to inner side of the anterior superior spine, the external and internal oblique muscles being divided, and the abscess after being opened in front should have a counter-opening at the posterior superior spine. A through-and-through tube is inserted, the cavity irrigated with water and an iodoform emulsion inserted. If the abscess has pointed below Poupart's, the above operation is done, as well as an opening in Scarpa's triangle.

The End-Results of the Bloodless Method of Reduction in Congenital Dislocation of the Hip.—P. REDARD (*Zeits. f. Orthopaedische Chir.*, Band x, Heft 1).—There are fifty cases, most of them observed for three or four years, some for only six months. Forty-three were of one side, seven were double dislocations. In fourteen of these cases a true anatomical reposition was obtained, as was shown not only by the disappearance of the shortening, but also by the stereoscopic X-ray picture, which is the most perfect method of determination. The ages between two and seven years are more favorable for the bloodless method, but it can be accomplished in older people; but operations above these ages are usually very difficult, and there is usually a transposition. Transposition was obtained in twenty-six of the forty-three one-sided cases, coming on not immediately after an attempt at reduction, but usually during the first month after operation, in those over seven years of age, following a hard reduction maneuver, a faulty placing of the bone in strong outward rotation, and failure of plaster cast to hold it. Also certain cases are found in which the bone socket is rudimentary and cannot receive the normal-sized bone head. Twice luxation was obtained, but later a transposition was secured. No accidents occurred during the reduction. The functional results in eight one-sided cases were perfect. In thirty cases the gait was much improved. Those cases where transposition was obtained showed an improvement of their function.

The Diagnosis of Hip Disease; an Analysis of Ninety-five Cases.—ROBT. W. LOVETT (*Bost. Med. Surg. Jour.*).—The cases were variously diagnosed, tuberculosis, "hip disease," being most frequent, and the paper shows that many cases likely to be classed as hip disease are not tuberculous, but entirely different affections. Excision was so rarely practiced, only as a last resort, that clinical symptoms and X-ray pictures alone determined the ultimate diagnosis. Fifteen cases were rejected, seven because they were old cases, eight because of insufficient data for diagnosis. An interesting group of twenty-one cases, which recovered after a transitory affection, therefore ultimately considered not tubercular, affords the conclusion that marked atrophy, night-cries, pain in the knee, severe muscle spasm, loss of gluteal fold, apparent shortening and fixation in deformity are not inconsistent with the presence of an affection which will speedily recover. That, as in the beginning, a third were diagnosticated tubercular without question, shows that this diagnosis cannot be made with any certainty. That the pathology of these non-tubercular cases must be a matter of conjecture, but some conform to Koenig's synovial type of acute infectious coxitis, others traumatic and rheumatic synovites, or epiphyseal hyperemia. These twenty-one cases recovered in from one week to four months, and if reported in

the light of their early symptoms, fourteen would have been considered hip disease, and the recovery percentage, with little or no treatment, would be one hundred.

A group of fourteen serious affections, not obviously tubercular, were almost all unqualifiedly diagnosed as such on admission. They eventually resolved themselves into two infantile paralysis, two osteomyelitis, one coxavara, two arthritis deformans and seven questionable cases, which are considered not tubercular. The proportion of osteomyelitis cases is smaller than the statistics of European clinics.

The last group of forty-five cases were in the beginning considered tubercular and eventually proved to be. It is shown accordingly that all hip cases are not "hip disease," and that some more certain diagnostic criterion must be found than night-cries, atrophy, spasm, etc. Of all the signs given "thickening of the trochanter" proved to be the most reliable. The X-ray is also of great value in early diagnosis.

Congenital Dislocation of Both Hips—Lorenz Method for Reduction.—ED. H. OCHSNER (*Illinois Med. Jour.*).—A child of four years with both hips dislocated was reduced by Lorenz method, which was not successful until the third attempt, when both hips remained in place, and were functioning normally after about two years in a plaster cast. After being well and using her extremities perfectly for several months the child died from an intestinal disturbance. At post-mortem the pelvis and hips were secured, which, when dissected, showed the heads of both bones large, but well adapted to the normal acetabula in which they rested, and the capsular ligament strong and hugging the head and neck closely. The ligamentum teres was wanting, or rather very small and unattached to the femur.

On the Remittent Limps of Hip Disease.—NEWTON M. SHAFFER (*N. Y. Med. Journal*, August 16, 1902).—This symptom, often misleading, is again emphasized, as it is frequently concluded that the early diagnosis of hip disease was made too hastily if the child is seen for the second time without a limp. The remission may occur several times before the symptoms become so pronounced that a diagnosis is made.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

The Improvement of Breast Milk and the Prolongation of Lactation.—T. S. SOUTHWARD (*Journal American Medical Association*, August 2, 1902) calls attention to the importance of having mothers nurse their children whenever this is at all possible. The fact that there is not enough milk to entirely nourish the child is certainly no excuse for taking the child altogether from the breast.

More attention should be paid to the mothers to increase the amount of milk. The mother's diet should be abundant and nutritious. Of fluids which tend to increase the lacteal secretion there are four:

Milk, of which the mother should drink a quart or more in the twenty-four hours.

Thin cornmeal gruel, prepared with or without milk, and well cooked.

Water, which should be taken freely.

Cocoa, which should supersede tea and coffee as a beverage.

The nursing mother should take at least three quarts of fluid per day.

Beer has but little nutritive value and often disturbs the infant.

Constipation and anemia in the mother should be corrected, if they exist.

If there is evidence of too great preponderance of proteids in the milk, the mother should remedy this by walking in the open air, the amount of exercise being gradually increased.

If the child does not thrive on the breast milk, supplementary bottle feedings should be given, but the breast milk should not be discarded at once, and every effort should be made to improve the breast milk, which is, after all, certainly superior to any modified cow's milk or artificial food.

Calomel in Diseases of Children.—SCHOEN-LADNIEWSKY (*Jahrbuch fuer Kinderheilk.*, August, 1902) believes that the value of this drug is not sufficiently recognized. As an intestinal antiseptic he believes it to be without a peer. In flatulent colic, acute dyspepsia and acute gastritis he has had the best possible results from its use. In cholera infantum it is of great value. So too in catarrhal icterus—the course of which, he thinks, can be materially shortened by the use of the drug.

The author cannot see that calomel does any good in scarlet fever, measles, typhoid or dysentery.

As a diuretic for children, he gives calomel a high place. In the ascites of nephritis and of chronic valvular lesion it is also of much value. As an antisyphilitic the drug is, of course, of value. The author never uses calomel as a laxative pure and simple, believing that he gets better results with other drugs.

It should always be ordered in broken doses and dispensed in powders containing cane (not milk) sugar.

The Management of Rheumatic Children.—F. M. CRANDALL (*Archives of Pediatrics*, August, 1902) calls attention to the fact that in children the symptoms of rheumatism are not massed together, as in adults, but are more frequently distributed through months or even years. Growing pains, slight joint manifestations, attacks of chorea and endocarditis occur at various times, so that the "history of a rheumatism may be the history of a whole childhood."

Therefore, according to the author, it is not sufficient to treat the symptoms as they arise. Preventive measures are especially important here. The management of the rheumatic child may be considered under the four headings of clothing, exercise, diet and medication:

1. *Clothing.*—Rheumatic children should wear flannel at all seasons; during the summer it may be of thin texture; cold and wet feet should be especially avoided.

2. *Exercise* must be carefully attended to.—Exposure on days of damp east winds or on slushy days must be avoided.

3. *Diet* should not be too restricted, except that the sugars and starches should be limited. In view of the tendency to anemia in rheumatic children, the diet should be generous and nourishing. The old notion as to the contraindication of nitrogenous foods is no longer held. As a prophylactic measure, adenoids, if present, should be removed and the throat should be watched.

4. *Medicinal Treatment.*—By the use of the salicylic compounds over long periods of time we can do much to prevent outbreaks of rheumatism. After an attack the salicylate should be used for one week of each month for a year or more. With reference to the treatment of the acute attack, the author prefers the salicylate to the alkaline treatment. Comparatively large doses are required at first—five grains every three hours to a child of six, forty grains a day—not to be given on an empty stomach. The rapid development of anemia should be combated by the early use of iron. Warmth to the afflicted joint is usually grateful. Rest in bed is essential, because while this does not absolutely prevent cardiac involvement, it will do more to that end than any other means we possess.

Hydrocephalus—Cure by Operation.—HUNTER (*Pediatrics*, August 15, 1902) discusses the subject of hydrocephalus internus and describes an operation that he did with excellent results. This operation was done after the method of Bruce and Stiles, which consists in producing an opening, or artificial canal, between the lateral ventricles and the subdural and subarachnoid spaces. This patient was a two-months' old child with enormously distended head, circumference twenty-one inches; child was totally blind.

A single curved incision was made, connecting the points of the lower external angles and the frontal fontanelle, and the flap was turned down. The dura was then incised and three or four strands of catgut were pushed beneath the dura. The other ends of the strands were pushed (with small forceps) into the lateral ventricles. As soon as the ventricles were reached, large quantities of fluid gushed out. The dura was then closed and the flap sutured into position. Marked improvement followed the operation. Eight weeks afterward a second operation became necessary because of reaccumulation of fluid. The same operation was done, except that larger catgut was used and a greater number of strands inserted, so that absorption should not go on too rapidly. After this the child rapidly improved and has remained well up to the present time, having shown normal development in the meantime. There has been no reaccumulation of the fluid.

Some Causes of Death in Diphtheria.—BARBIER (*Rev. Mens. des Mal. de l'Enf.*, August, 1902) has analyzed his fatal hospital cases of diphtheria, which were examined very carefully as to the existence of cardiac thrombosis, and as to the co-existence of tuberculosis. In 1901 there were forty-five autopsies in patients dying of diphtheria—in twenty-three of these cardiac thrombosis (*not* preagonic) existed. The seat of this thrombosis was most frequently the right auricle, though quite often the right auricle and ventricle were involved. In twenty-one of the twenty-three cases clots were found in the cavities, the clots being organized and evidently not merely preagonic. Bacteriological examination was made in nineteen cases, eighteen times with positive results. The Klebs-Loeffler bacillus was found in pure culture three times; in the other cases there were mixed staphylo- and streptococcic infection.

This cardiac thrombosis is nearly always an accident of convalescence—occurring as a rule after the local manifestations have disappeared. It may occur as late as the fifteenth day.

The symptoms, which usually come on some time before death (though occasionally death is very sudden), are general waxy pallor and coldness of the extremities. The child lies perfectly quiet. At times slight cyanosis supervenes. The child then appears to suffer intense anguish, marked in its later stages by extreme agitation, usually without convulsions until the end comes. Treatment is of absolutely no avail.

With reference to tuberculosis, the author believes that the course of diphtheria is very unfavorably influenced by co-existent tubercular lesion; that in tubercular patients cardiac thrombosis is more common in convalescence.

The Various Forms of Icterus in Infancy.—SKORMIN (*Jahrbuch fuer Kinderheilk.*, August, 1902) contributes an exhaustive study to the literature on this subject.

He recognizes the following forms:

1. Benign icterus neonatorum—a resorption icterus. It begins in the second or third day of life and lasts until about the middle of the second week. In this form there are no biliary coloring matters *in solution* in the urine.

2. Septic icterus—occurring as a result of septic infection of the new born. The site of infection is, as a rule, the navel. The diagnosis is to be made by the concurrence of the symptom complex of sepsis.

3. Winkel's disease. Here there is the coincidence of icterus and cyanosis with hemoglobinuria. This form (which is often fatal) is looked upon as infective in its origin, the infection starting from the gastro-intestinal tract.

4. A severer form of infective icterus—coming from the gastro-enteric tract—has been described by Lesage and Demelin.

5. Icterus after hemorrhage. This is a rare form and is explained by absorption of the hemoglobin from the extravasated blood, its transportation to the liver by the blood stream, thus secondarily giving rise to jaundice.

6. Catarrhal icterus. This form is very rare in infancy.

7. Toxic icterus. A few cases have been reported—*e. g.*, after accidental poisoning with carbolic acid and with resorcin.

8. Icterus caused by acute yellow atrophy of the liver. Very few cases of true acute yellow atrophy have been reported in infants, but the disease does doubtless occur at this time of life.

9. Icterus may occur as the result of congenital defect or of congenital occlusion of the biliary passages. There have also been reported a few cases of congenital cirrhosis of the liver with icterus.

10. As a result of hereditary syphilis there occurs at times a congenital peripylephlebitis—with resulting compressions of the portal vein—and icterus.

An extensive bibliography is appended to the article.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

The Pathology of Acute So-called Myelitis.—H. DOUGLAS SINGER ("Brain," Summer, 1902).—This is a suggestive article calling attention to the importance of syphilis in the etiology of the disease commonly known as acute myelitis. In two cases the chief pathological change was found to be in the blood vessels in the form of a syphilitic arteritis. In a review of nineteen cases of myelitis, coming under the author's observation during the last two years, a history of syphilis was found in fifteen. The interest of this investigation at the present moment lies in the fact that in seventeen out of nineteen cases there was either syphilis or senile degeneration, the two most potent factors in the causation of thrombosis of arteries. The following are noted as conclusions: 1. So-called acute myelitis is found on microscopic examination in the majority of reported cases to be not inflammatory, but due to thrombosis of spinal vessels. 2. That by far the most common cause of this thrombosis is syphilitic arteritis, and that senile arterial degeneration forms a considerable proportion of the remaining cases. 3. This view as to the pathology is confirmed clinically by the analogy between this disease and cerebral thrombosis.

Poliomyelitis of the Adult.—E. W. TAYLOR (*Jour. Nerv. and Ment. Dis.*, August, 1902).—The occurrence of true poliomyelitis in an adult with an acute onset, under conditions suggesting an infection, is no longer disputed. There is at the same time much confusion regarding the relationship of this disease with some others, notably Landry's paralysis. The case which forms the basis of this article is a typical picture of the disease as it is usually found in an adult—"unexplained ill feelings, with rise of temperature, followed by paralysis, involving all four extremities, but predominantly the legs, which reaches its height in from one to three days and then tends to improve; some subjective disturbance of sensation, passing in a few days, leaving a condition essentially

of motor paralysis of the muscles of the trunk and of the extremities, without at any time disturbance of consciousness." A summary of the chief pathological findings in the nervous system are essential limitation of the pathological process to the spinal cord, chief, though not exclusive, localization in the ventral horn, evidence of primary inflammation with secondary degeneration and destruction of nerve cells, marked degeneration of peripheral nerves. A number of other cases are cited, and the literature of the subject is carefully analyzed.

Conclusions.—The following conclusions as a practical clinical guide and as a working basis for further study seem justified:

That adult poliomyelitis is a well-marked clinical affection, characterized by initial fever, rapid onset of usually extensive paralyzes, motor in type, with a tendency toward recovery, though often resulting fatally, from respiratory paralysis. That the disease has frequently been confused with multiple neuritis and so-called Landry's paralysis.

That its anatomical basis is a primary inflammation in the distribution of the ventral arteries of the cord, leading to a destruction of nerve-cells.

That this inflammation is rarely sharply limited to the ventral horns, but extends into the dorsal gray matter, the surrounding white matter and at times into the oblongata.

That there is no sharp line to be drawn between these lesions and still more extensive ones giving rise to totally different clinical pictures—*e. g.*, encephalitis, poli-encephalitis, poli-encephalo-myelitis.

That, therefore, anatomically the disease is much less sharply characterized than it is clinically. That its final place must be determined by a study of its cause or causes, as related to various other degenerations and inflammations of the nervous system.

That from the practical point of view it is well to consider those cases poliomyelitis which show a flaccid atrophic paralysis of sudden onset, with definite anatomical changes limited to the ventral horns of the cord and their immediate vicinity.

Multiple Neuritis in Connection with Basedow's Disease.—DILLER (*Neurologische Centralblatt*, August 16, 1902).—Woman, aged forty-eight years, developed quickly the symptoms of Basedow's disease—pulse, tremor, exophthmo and neurasthenic symptoms. The thyroid gland was enlarged, pain developed in all the extremities with atrophy of the muscles, which reached a high grade. The patient died from exhaustion. The author explains the case to be the result of a fatal toxin originated by the thyroid gland which caused the symptoms typical of Basedow's in addition to the multiple neuritis.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Surgical Intervention in Medical Nephritis.—POUSSON (*Ann. des Mal. des Org. Gen.-Urin.*, May, June, July, 1902).—The author reports eight operations upon six cases of chronic nephritis with two deaths, both of which were in the last period of Bright's disease. The four cases which survived have shown considerable amelioration of the condition. Three have so far improved as to be practically well, while the fourth, although the urine has resumed an almost physiological composition, still had some uremic symptoms when he left the hospital.

Pousson has collected thirty-three cases operated upon with a mortality of

two. It may seem a hazardous undertaking to attack a chronically inflamed kidney and contrary to former surgical axioms, yet with the aid of asepsis much of the danger is removed. It is clearly demonstrated that those cases of chronic nephritis that come to the dead-house are bilateral, and practically all of the kidney substance involved, but these are cases in the very latest stage of the disease, while those that come to the surgeon are susceptible of being unilateral, just as we find that in a diseased kidney it is not the whole kidney substance that is involved at first, but only spots here and there, separated by perfectly sound kidney substance.

Besides catheterization, pain upon deep pressure will aid in determining which kidney is most involved. If edema is greater on one side of the body than the other, it is of much diagnostic value. In one case of the author's, after operation upon the right kidney, edema on that side disappeared more rapidly than on the left side. The fact that the side most affected shows more edema finds its explanation in the hypothesis of Potain, who attributes the edema in the disease of Bright to paralysis of the capillary vessels under the influence of a reflex, which starting from the kidney is transmitted to them through the vasomotors. The operation upon one kidney and benefit following it influence for good the disease in the other kidney.

In addition to incising the kidney capsule along its convex border and drainage, Pousson adds fixation to the lumbar wall by one or two points of suture with catgut, although the method of nephrocapsectomy of Edebohls deserves consideration.

While the operations of cutting the capsule that the author and Harrison have done relieves the tension, and may act like the surgical intervention in glaucoma, yet the operation of Edebohls, by allowing the formation of new blood vessels, may keep up the improvement and lead to cure.

Hernia of the Bladder.—VOITURIEZ (*Ann. des Mal. des Organ Genito-Urin.*, June, 1902).—From the writer's experience hernia of the bladder is by no means the rare condition it is generally considered, be it inguinal, crural, obturator, or perineal. The symptoms of this condition are in a certain number of cases sufficiently clear. In the primitive cystocele, or that in which there is no peritoneal investment, we find a tender fluctuating tumor when the bladder is filled with urine, but soft and flaccid when it is empty. Pressure upon the tumor creates a desire to urinate, while at the same time the cystocele partially disappears. The patient, too, finds difficulty in evacuating the urine and perceives that the tumor is more tender when he has a *besoin*, often contracting the habit of compressing the tumor while voiding his water. The hernia pouch may be emptied by manual expression after drawing the water with a catheter, or, if it enters the diverticulum, coincident with the subsidence of the tumor there is an emission of a large quantity of urine. Finally, after evacuating the bladder, intravesical injection will cause the tumor to reappear. Rectal touch discovers the prostate to be elevated, while the *bas-fond* of the bladder is against the pubis.

While the diagnosis may at times be difficult in secondary cystocele, or that which accompanies an intestinal hernia, yet one sign of considerable moment is that the tumor appears bilobar. An interesting complication of the condition is the formation of a stone in the herniated portion of the bladder.

These herniæ are of special interest in operations for the radical cure of intestinal hernia; for, unless recognized, the bladder might be wounded or opened. The author reports one case in which this accident happened.

Ulcer of the Bladder.—SCHMIDT (*J. A. M. A.*, July 19, 1902).—The most common ulcers are those in the base of the bladder of gonorrheal origin. In this condition, at the summit of spots of infiltration, the tissues give way and

thus form sunken ulcers as if perched upon a plateau. The ulcerated surface is covered with a whitish coating. The area of bladder mucosa between the ulcers is of a healthy appearance.

In non-gonorrheal cystitis we find ulcers in great numbers, close together, and involving the entire mucosa, while the parts between the ulcers are involved in the inflammation.

Tubercular ulcers are always small, and in their immediate neighborhood are small grayish-white nodules. Inflammatory reaction about the nodules is absent. They are commonly situated about the urethral orifice.

In necrosis from neoplasms the ulcer occurs in the most prominent part of the tumor, its edges are irregular and undermined, and immediately surrounding it hemorrhagic spots may be noted.

The solitary ulcer appears as if stamped out of a mucosa otherwise healthy. It is bright red and granulated.

The *ulcus cystoscopicum* occurs on the fundus or vertex of the bladder, has no inflammatory reaction about it, has the shape of the instrument that made it, and usually heals within fourteen to twenty-one days. The author doubts the syphilitic ulcer, and gives arterial thrombosis with consequent gangrene as a cause of perforating ulcer.

Bladder irrigations and instillations are not sufficient to cure ulcers. They should be curetted and cauterized, and this is most readily done through the operation cystoscopy.

In generalized cystitis this method is useless. The bladder should be opened and the entire mucosa curetted. In cystitis dolorosa, besides complete curettage, the bladder should be compactly tamponed, and the tamponade should be kept up until the bladder walls have lost their sensitiveness.

The author reports five cases of ulcer of the bladder; among them especially may be noted case V, one of tubercular ulceration, in which cauterization so improved the condition that the urine became clear, no germs could be found, desire and frequency were greatly lessened, and in six months the patient gained forty pounds in weight and cystoscopy was negative.

Modifying Injections in the Treatment of Tuberculosis of the Epididymis.—BOHDANOWICZ (*Ann. des Mal. des Organ. Genito-Urin.*, June, 1902).—Attention is called to the value of camphorated naphthol, after the method of Calot, as an injection in tuberculosis of the epididymis. However, its use is limited to the cases of abscess formation with adhesion to the skin. In the two cases reported, treated after this method, the diseased condition disappeared.

Treatment of Prostatic Hypertrophy Associated with Stone in the Bladder by Means of Litholapaxy and Bottini's Operation at One Sitting.—MEYER (*Annals Surgery*, July, 1902).—Quoting Chismore's sixty-one cases of modified litholapaxy in prostatitis in support of the value of litholapaxy in prostatitis, Meyer adds the Bottini operation for the relief of the obstruction, either doing the litholapaxy first (most usual), then the Bottini at one sitting, or vice versa (not usual). He reports three cases with most excellent results, two being done under spinal anesthesia.

Nephrectomy, Subsequent Nephrotomy and Finally Suprapubic Cystotomy.—FERGUSON (*Jour. A. M. A.*, July 5, 1902).—A boy, aged eight, two or three weeks after a fall developed a painful swelling in the right hypochondriac and lumbar region. As it seemed cystic, a trochar was introduced and fluid evacuated, later a urinary fistula developing. The X-ray showed calculi in both kidneys.

November 15, 1901, right nephrectomy was done, and on December 22d the left kidney was opened and a calculus removed. February 2, 1902, a stone was

removed from the meatus of the glans. March 7th a suprapubic cystotomy was done and a calculus extracted from the bladder. The patient is now free of pain and gaining in every way.

A Discussion of the Operative Treatment of Prostatic Hypertrophy.—LEWIS (*J. Cut. and Genito-Urin. Dis.*, July, 1902).—Various varieties of prostatic hypertrophy are considered and illustrated. The mode of operating should be selected according to the kind of hypertrophy, and the author clearly indicates which are most suitable for the suprapubic, the perineal or the Bottini method. It is interesting to note that he selects for the Bottini method cases of extreme debility, those with a bar or sessile obstruction of not too great dimensions, those with incomplete collar formation, and possibly those at the beginning of catheter life as a prophylactic against further obstructive hypertrophy.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Investigations on a Polymorphic Coccus, the Habitual Denizen and Parasite of the Human Skin.—AXEL CEDERCREUTZ (*British Jour. Dermatology*, August, 1902).—The discussion as to the exact relationship of the cocci found in various diseases of the skin and under normal conditions, has served to clear up a good many doubtful points in the bacteriology of the skin.

Mr. Cedercreutz has spent eight months in the laboratory of the St. Louis Hospital (Paris) under Sabouraud's direction, in the study of cutaneous pathology, and the present monograph is the result of his observations, so far as the cocci producing white or grayish cultures are concerned. He has carried out a series of investigations as to the morphological characters, their variations under different conditions, and the pathogenic properties of the organism in question, and arrives at very clear conclusions respecting the matter. The amount of confusion which has been introduced by the zealous endeavors of various observers to establish specific characteristics in the case of cocci which they have observed is well illustrated by this work. He says: "According to our opinion, the majority of the cocci of the skin described by authors range themselves under the category of the staphylococcus aureus or of this polymorphic coccus which we have studied, and the differences described are due to observations made at different stages of its evolution. For instance, it appears that this polymorphic coccus is the organism described by Demme (1886), Dahnhardt (1887), Claessen (1893), Bulloch (1895), Remlinger (1896), Whipham (1896), Class (1899), Berholm (1900), Whitfield (1900)."

The polymorphic coccus of Cedercreutz is the *micrococcus* of Unna, the *micrococcus* or *staphylococcus cutis communis* or *coccus butyricus* of Sabouraud, *staphylococcus epidermidis albus* (Welch), and Cedercreutz goes the length of advancing the hypothesis which has been suggested by other observers, that the distinction between the coccus producing yellow cultures and that producing the whitish or grayish cultures, which he has studied, is probably artificial and does not exist in actual fact. The following are some of the conclusions which the author states:

"In our opinion the flora constituted by the cocci of the human skin is far less complex than has been imagined by many dermatologists. The fact which has led observers into error is that on the human skin there exists a coccus liable to undergo great variations. These variations affect the appearance and characters

of the cultures as much as the form of the individual organisms. The variations which the cocci are capable of undergoing may be determined up to a certain point by varying the media in which they are cultivated. But the nature of the stock from which they have sprung also plays a certain role in the production of these changes. The color of the cultivations of these micro-organisms on ordinary gelose may vary through all tints, from milk-white to golden-yellow; and on gelatine the organism may produce cultures almost of a canary-yellow tint. The coccus grows well upon most of the ordinary media employed in bacteriology. It prefers, however, media which are slightly acid or neutral to those distinctly alkaline. The best temperature for its growth is from 30 to 40 °C. The cultures develop slowly on gelatine at a temperature of 20 °C. Gelatine is not liquefied under these conditions. Sown in gelatine which is maintained in a liquid condition in the incubator, the coccus usually produces the effect that the media does not liquefy when it is brought to the ordinary laboratory temperature, even after a considerable lapse of time. The coccus does not coagulate milk, or does so only after some time. In broth under anarobic conditions it does not produce visible growth, but maintains life for a long time in this media. The coccus shows considerable variation, both in size and in magnitude, varying from distinct spheres to flask-shaped elements. The diplococcus form is not infrequently assumed. The large variety of the organism developed under favorable conditions of growth appears to possess greater powers of resistance than the others. Examined in the suspended drop, no movement is observed except the ordinary Brownian movements. In preparations made from young cultures the organisms are not decolorized by Gram's method. The organism has very slight pathogenic effects upon guinea-pigs, mice or rabbits. When inoculated into the hair follicles of human subjects it produces folliculitis, which rapidly heals. In the pus of these lesions the cocci are usually surrounded by leucocytes, and under these circumstances are decolorized by Gram's method. The relations existing between this coccus and the staphylococcus aureus cannot yet be sharply defined. The morococcus of Unna, the staphylococcus cutis communis, is either this polymorphic coccus or is the result of an extraordinary close symbiosis between this coccus and a small coccus producing white cultures (staphylococcus?)."

Many dermatologists have described in more or less detail cocci which are certainly identical with this polymorphic coccus. Class has considered the organism as the pathogenic agent of scarlet fever, and has given a very good description, in which the morphological variations of the coccus are noted.

The "contagium of syphilis," cultivated and described by Von Niessen, has the greatest possible resemblance to this coccus.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

Regarding the Question of a Glycosuria Resulting from an Otitis.—GRUNERT (*Archiv fuer Ohrenheilkunde*, 55 Band, 3 und 4 Heft).—The important influence which diabetes exerts on the course of an otitis media is well known, but our knowledge as to whether a glycosuria can be the result of an otitis media or its complicating brain lesion is very indefinite, and the literature on the subject is very limited. The author cites two cases of otitis in which urine examinations previously made showed no sugar to be present, while during the acme of the disease large amounts of sugar were excreted in spite of the fact that all carbo-

hydrates were withdrawn from the food. Both were cases of chronic otitis media. One was complicated by a diffuse purulent meningitis, as was proven by lumbar puncture. In the other there was an extra-dural abscess. Operative measures were applied in both cases, and after recovery the urine was free from sugar in spite of a mixed diet. One case was under observation for nearly five months, and during that time the urine was always free from sugar. The writer cannot give an explanation of the occurrence of the glycosuria in these cases, but believes it to be due to the action of certain toxins which originate in these pus accumulations. Sugar can occasionally be found in the urine during the course of an acute purulent otitis media. Bacon reports a case of acute mastoiditis in which sugar was found in the urine previous to operation, but disappeared after operation and never returned. The author suggests that possibly by animal experimentation this interesting question may be solved.

Electric Light in Diseases of the Respiratory Organs.—FREUDENTHAL (*New York Med. Journal*, July 12, 1902).—The author has been experimenting with electric light in the treatment of diseases of the respiratory organs for the past thirteen years. At first the incandescent light was used, but now he prefers the arc light. He uses a search-light, the same as used on ships. To overcome the great heat produced by the electric light, various devices, such as screens, lenses, etc., have been used, but the writer prefers to expose the different parts successively, and when it gets too warm for comfort he also applies cold cloths. However, in some cases he uses a blue glass screen, especially in the beginning. He believes the electric light to be a powerful stimulant and regulator of general nutrition. It has also a very marked anesthetic effect on the skin and those "inner" parts which can be reached by it. The pain in the larynx and that between the shoulder-blades of consumptives is occasionally, and sometimes very promptly, relieved. The histories of several cases of tuberculosis of the lungs and larynx are given in which the electric light was used as a therapeutic agent. He believes that in incipient cases he has brought about a cure, but in advanced tuberculosis electric light is only a palliative measure of occasionally great value. In hay asthma he has applied the remedy in twenty-four patients; out of these fourteen experienced decided improvement in all respects very soon after treatment was commenced. The rest improved but little or left treatment too soon to form an opinion. He applied the light to the face indirectly by letting the rays pass through a blue glass screen. The same plan is pursued if there is a necessity of applying it to the chest.

The Successful Treatment of Hay Fever.—JERVEY (*New York Medical Journal*, August 9, 1902).—Hay fever is essentially dependent upon a triad of conditions. These three essentials are: (1) A peculiar nervous susceptibility; (2) some abnormality—a hyperesthesia or a malformation, or both, perhaps ridiculously trifling—in the nasal structure; (3) the presence of some individually irritating substance in the atmosphere. Remove any one of these three conditions and the disease is controlled. The first or neurotic condition is not always easy to regulate, and the third condition—that of irritating substances in the atmosphere—is also more or less incapable of regulation. The natural deduction, then, in the obtaining circumstances, is to attack the second essential of the existence of the disease. The author asserts that there is not one case in ten of hay fever which cannot be practically immediately relieved by proper attention to the local condition in the nose; and this, combined with suitable systemic treatment subsequently faithfully carried out, will not only relieve, but ultimately cure. The histories of two patients are given. The first case was that of a physician. He was first seen in May, 1900, and had been a sufferer for years. His was a typical case of hay fever, with all the symptoms violent and exagger-

ated. The treatment was spraying the nose with an alkaline antiseptic solution (a ten per cent. solution of cocaine being alternately used in order to open up the nose); an aqueous solution of suprarenal extract was applied. The blood vessels and swollen tissues were promptly reduced to a practically natural condition. No abnormal growth could be detected in the nose. The case was one of localized hyperesthesia in the nasal mucosa, and these were controlled by the applications. The patient was directed to spray out his nose two or three times a day (or oftener, if necessary) with Dobell's solution, followed with a solution of suprarenal extract, and to take internally three grains of the extract (palatably combined with licorice powder) every three hours. The attack was aborted on the spot, so to speak. The next year, 1901, he had a return, as usual, but with much reduced severity; and a 1 to 4000 solution of adrenalin chloride met the indications and promptly conquered them.

The second case was that of a woman, who had also been suffering for years. The treatment employed was the same as in the first case, only that a polypoid enlargement was removed from the region of the middle turbinal on the left side. She was also given, besides the suprarenal extract, the elixir of phosphate of iron, quinine and strychnine. She has since had no return of the hay fever.

The Local Application of Heroin Hydrochloride.—ROSENBERG (*Laryngoscope* August, 1902), in his first experiments, employed a watery solution of 1 to 20 0.1 cm. of which contained 0.005 heroin, corresponding to the ordinary dose but lately he has reduced the concentration of heroin to one-half (that is, a solution of 1 to 40), so that of this 0.2 cm. can be injected without any risk. There need be no hesitation as to its local application, if the quantity used does not exceed the dose prescribed internally, and this, as a rule, is not necessary.

The effect of the local application of heroin in the larynx is twofold—first, cough allaying; and second, analgesic. Heroin owes its recognition as a remedy against irritating and dry coughs to its influence in reducing both central and peripheral irritability. This effect is naturally manifested by its local application, since it is as readily absorbed by the larynx or trachea as by the stomach. When applied to the mucous membrane the sensibility is reduced, as we have found by numerous experiments. A few drops of the solution upon a cotton pledget, and this applied to the mucous membrane of the nose, pharynx or larynx (in doing which not one-half of the solution is used up), we are able, by touching with a sound before and after the application, to demonstrate a diminution of the sensibility. Hence, heroin is also of service locally in coughs in certain cases entirely apart from its internal effect. In all patients suffering with laryngeal tuberculosis, he has often been able to note a considerable diminution and even an almost complete cessation of the cough for a number of hours up to twelve, or even the entire night. The effect seems to be cumulative, the pain in laryngeal tuberculosis disappearing at first only a few hours, and later remaining absent the entire day. In order to obtain the full action it is, of course, necessary to deposit the fluid upon the site of the disease, and not to be satisfied with having merely injected the larynx.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

Universal Test-Characters Particularly Applicable as Visual Tests for Children.—A. E. EWING (Descriptive pamphlet with plates, 1902).—Figures and characters intended for the determination of visual acuity in young children and illiterates have been designed by Snellen, Burchardt, Boettcher, Guillery, Galezowski and others. Praun has recently published a series of figures representing the hands of a clock in different positions. Heimann has adopted a picture of a human hand with the index finger extended and pointing in various directions. Tests heretofore published demand extreme care on the part of the examiner to prevent misinterpretation or are so abstract as to be practically of little use.

Ewing's series conforms to the ratio 1:0.707, beginning with 2.5 metres and ending with 56 metres. With insignificant variations it follows Snellen's one-minute scale for the thickness of the line and his five-minute scale for the size of the character. The objects represented are a cross, horseshoe, square, circle, chair, rocking chair, pitcher, star, heart, mug and tea-pot. The characters are arranged in lines each containing a single character of each size and also in lines of a single size.

The writer's experience with this series shows that it is of greatest value in determining the visual acuity in children from three to four years old, in illiterates, aphakial illiterates and foreigners who do not know the Roman or German letters.

The Nature and Treatment of Pterygia.—J. O. McREYNOLDS (*Jour. A. M. A.*, August 9, 1902).—According to the writer, pterygia are produced by the "prolonged irritating action of several factors, chief among which are: heat, a dry atmosphere, high winds, exposure to sunlight, and an abundance of dust, especially if alkaline in character." As might naturally be inferred, ranchmen, farmers, etc., who are constantly subjected to the conditions mentioned above, constitute the vast majority of the victims of this disease.

Simple abscission of the growth leaves a gap which must be covered in by sliding the conjunctiva and suturing. The line of apposition is rarely as smooth as normal conjunctiva, and subsequent irritation is apt to give rise to new vascular formation and the regrowth of the pterygium. Transplantation is less likely to be followed by recurrence.

McReynolds has devised the following method, which is a modification of Desmarre's operation: The neck of the pterygium is firmly grasped by fixation forceps. The constricted portion is transfixed by a Graefe knife and the pterygium shaved off from the cornea as smoothly as possible. The conjunctiva is divided by scissors along the lower border of the pterygium from one-fourth to one-half inch in the direction of the canthus. The body of the pterygium and the conjunctiva lying below the oblique one-half cut are separated from the sclera by blunt dissection. A silk thread is armed at both ends with small, curved needles, which are passed through the apex of the pterygium from without inwards. The needles are then introduced in parallel direction beneath the loosened lower segment of conjunctiva, and emerge in the neighborhood of the lower fornix, separated from each other about three-sixteenths inch. The lower conjunctival segment is then gently lifted up and traction made on the sutures. The pterygial tip glides beneath the conjunctiva. The sutures are then tightened and fastened.

As the result of the downward traction the conjunctiva above is thinned and closely applied to the sclera, and the margin of the conjunctiva usually coincides

with the sclero-corneal margin. In case there is a slight overlapping, the redundant conjunctiva can readily be trimmed away. In large pterygia the tip and a portion of the body may be abscised before burying.

The special advantages of this method are: (1) absence of a visible stitch; (2) concentration of the vascular activity in the lower fornix without tendency to encroach on the cornea; (3) rapidity of healing of the corneal wound; (4) excellent cosmetic results.

The Treatment of Serpiginous Ulcer of the Cornea.—C. J. KIPP (*Jour. A. M. A.*, August 9, 1902).—Serpiginous ulcers of the cornea presenting the following features are regarded by Kipp as retrogressive in type, healing readily under simple treatment: Straight lines diverge from the margin of the ulcer and pass rather obliquely into the deeper layers. The further ends of these lines are connected by grayish striæ which, in some cases, unite to form a ring of the same general contour as the margin of the ulcer, but situated more deeply. The cornea between the radiating striæ is cloudy. The general appearance is that of a spider's web.

These features never develop under treatment, and in untreated cases do not appear before the fifth day. As the ulcer fills up the opaque lines disappear. Active destruction of tissue by cauterization, etc., is contraindicated and treatment should be confined to warm boric acid collyria and atropia. The concomitant iridocyclitis is usually not severe. Blennorrhea of the sack is best managed by slitting the canaliculus and syringing. Later, gentle massage of the cornea with a salve containing the yellow oxide of mercury is of assistance in promoting resorption.

In cases which do not present these linear opacities the treatment must be more active. Warm boric acid compresses are applied continuously, atropia is instilled several times a day, and iodoform is dusted on the ulcer. If the advance of the ulcer is not checked, the galvano-cautery is applied to the entire denuded surface, which has previously been mapped out by the fluorescein stain. If the ulcer is very deep it should be perforated by the cautery, which procedure is also advisable if the pupil is not well dilated or the tension is above normal. Cauterization is repeated if necessary. Paracentesis at the corneal margin is useful in some cases complicated by severe iridochoroiditis, but in general perforation with the cautery is much to be preferred. Severe pain is well controlled by aspirin or sodium salicylate in ten-grain doses. Uncontrollable cases are usually associated with diabetes or nephritis, and, if the iridochoroiditis persists, may lead to closure of the pupil and secondary glaucoma. Nasal complications should receive appropriate treatment.

Nellhagen has found that the presence of the pneumococcus is indicative of a malignant form, and the most active treatment is demanded.

A Case of Epithelioma of the Margin of the Eyelid Apparently Cured by the Use of a Solution of Adrenalin Chloride.—W. B. MARPLE (*Med. Rec.*, August 23, 1902).—A patient presenting an epitheliomatous infiltration extending from the external canthus to about the middle of the lower lid, was given a solution of adrenalin chloride, 1:1000 as a placebo, in the expectation that operation would eventually have to be resorted to. At the end of a month there was a noticeable decrease in the hyperemia of the growth, which appeared also to be shrinking. Six months later there was hardly a trace of the tumor.

The cure is explained on the ground of the production of a state of temporary bloodlessness in a poorly vascularized tissue.

BOOK REVIEWS.

ATLAS AND EPITOME OF OTOTOLOGY. By GUSTAV BRUHL, M. D., of Berlin, with the collaboration of Professor Dr. A. Politzer, of Vienna. Edited, with additions, by S. MacCuen Smith, M. D., Clinical Professor of Otology, Jefferson Medical College, Philadelphia. With 244 colored and 39 lithographic plates, 99 text illustrations and 292 pages of text. Philadelphia and London: W. B. Saunders & Co. 1902. Cloth, \$3.00 net.

This excellent volume is a translation of one of the series of the well-known Lehmann's Atlases, and contains everything of importance in the elementary study of otology. It is both didactic and clinical in its teaching. The minute anatomy is very carefully gone into. The illustrations are beautifully executed and illuminate the text in a singularly lucid manner. The association of Prof. Politzer with this work notably enhances the value of this treatise. This work is especially adapted to the wants of the student.

DISEASES OF THE NOSE, PHARYNX AND EAR. By HENRY M. GRADLE, M. D., Professor of Ophthalmology and Otology, Northwestern University Medical School, Chicago. Handsome octavo of 547 pages, profusely illustrated, including two full-page plates in colors. Philadelphia and London: W. B. Saunders & Co. 1902. Cloth, \$3.50 net.

This volume is intended to present disease as the author has seen it during an experience of nearly twenty-five years. It has been his aim to answer in detail those questions regarding the course and outcome of diseases which are not easily obtained from text-books. The work is divided into two parts; the first deals with the diseases of the nasal passages and pharynx, the second with the diseases of the ear. Liberal space is devoted to topographic anatomy. Two chapters are given to etiology and hygiene, which contain many points of practical value. The chapter on the diseases of the accessory sinuses is up to date and is rich in practical suggestions. The reviewer agrees with the author that acute follicular tonsilitis is a self-limited disease and that at present we possess no method of treatment which will abort or shorten the course of the disease. The diseases of the ear are dealt with in a concise but thorough manner. It is a valuable text-book, but can hardly be classed as a work of reference.

AMERICAN GYNECOLOGY. Issued monthly. CHARLES JEWETT, M. D., Editor-in-chief. Subscription price, \$4.00 a year, in advance. 1 Madison avenue, New York.

The first number of this new publication is before us. The list of its editorial board and collaborators contains the names of the best known gynecologists of the country, and with their co-operation the new journal should have no difficulty in holding a prominent position among our contemporaries.

We wish *American Gynecology* a successful career and a worthy support of the profession.

MOTHER AND CHILD. By E. P. DAVIS. Philadelphia: J. B. Lippincott Co. 1902.

This is the second edition of a book written originally by Keating and Davis. The hygiene of pregnancy and of the lying-in period are first discussed. Then follow chapters on the care of the child—hygiene, food, clothing, development, signs of illness, nursing, emergencies.

The book is most readable, and will doubtless be of value to young mothers. The book-work is very good, the illustrations being especially abundant and valuable.

THE ARTIFICIAL FEEDING OF INFANTS, INCLUDING A CRITICAL REVIEW OF THE RECENT LITERATURE OF THE SUBJECT. By CHARLES T. JUDSON and J. CLAXTON GIDDINGS. Philadelphia: J. B. Lippincott Co. 1902.

It is not often that one can say that a medical work fills a long-felt want, but in the present instance this is most certainly true. The authors have abstracted all articles, foreign and American, pertaining to the various branches of the subject that have appeared from 1894 to 1901, inclusive, and have also drawn upon the more important monographs and text-books.

The abstracts are appropriately grouped under various heads, including a historical sketch, mother's milk, cow's milk, digestion, modern methods of infant feeding, weaning, care of the milk, bacteriology, sterilization and pasteurization, weight and growth of the infant, and feeding of premature infants. Then the authors draw conclusions from this rich material, giving chapters on principles of infant feeding, methods of home modification and practical rules for feeding. An analysis of various artificial foods is appended, as is also the complete bibliography.

The value of such a book to the general practitioner can hardly be overestimated, and the authors deserve the thanks of the profession for their really great amount of work, which has resulted in so useful a book.

The book-work itself is most excellent.

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ORIGINAL ARTICLES.

ON EPISTAXIS AND ITS TREATMENT.

BY DR. ADALBERT HEINDL, of Vienna, Austria.

It is my purpose to sum up in this article all the facts concerning epistaxis which are of value to the practicing physician.

If we wish to successfully deal with epistaxis it will be necessary, first of all, to understand its causes; and of these the acute infectious diseases, such as scarlet fever, measles, diphtheria, influenza, typhoid fever, etc., must be considered as being the most frequent.

Among the constitutional diseases which often lead to profuse bleeding from the nose are purpura hemorrhagica, scurvy, simple and pernicious anemias, leukemia, acute yellow atrophy of the liver (to which Bresgen calls attention), all diseases which go with icterus, nephritis, arterio-sclerosis, uric acid diathesis, diabetes mellitus and insipidus, cirrhosis of the liver, cardiac disease (especially aortic insufficiency), phthisis and syphilis (which will be dwelt on later).

Other causes are onanism, climacterium, pregnancy, cessation of the menses (in which case the bleeding may be vicarious), heredity, chronic alcoholism, tumors of the thyroid gland, mental and physical overexertion. Hemorrhages also occur as the result of certain occupations, as those requiring the handling of certain chemicals: for example, phosphorus, chlorine gases, lead and its combinations with acids, nitric acid, sulphuric acid, chromic acid, etc. The latter play a most important part in the production of nose-bleed, owing to their irritating and corrosive action on the mucous membrane, especially that of the septum. Frequently I have seen severe hemorrhages from the nose in glass workers, metal polishers, tanners, etc., which refused to yield to treatment until they had given up their occupation for a time, when most satisfactory results were obtained. This must especially be borne in mind in the case of chemists, as they are frequently exposed to gases which are odorless but at the same time very pernicious.

I may also mention that I have frequently observed a dry rhino-pharyngitis and laryngitis (similar to atrophic rhinitis) in patients who deal with alcoholic liquor. There is a rupture of the upper surface of the mucous membrane with hemorrhage. This condition would soon disappear when the patient would give up his occupation for a time. I trace this phenomena back to the drying qualities of the alcohol and hygroscopic action of the various fusel oils.

In all these cases the bleeding may be slight, quickly ceasing but frequently recurring, or it may be so severe that the life of the patient is endangered, and requires a vast amount of patience, quick action and presence of mind on the

part of the physician. Never should he rely on a hastily applied tampon, but should as soon as possible endeavor to ascertain the cause of the bleeding. With regard to this the following may be of service: It must be remembered that most of the hemorrhages from the nose occur from the mucous membrane of the septum when they are not from operations or some destructive process in the nose. In infectious diseases the bleeding may occur from the whole surface of the nasal mucous membrane, and also the naso-pharynx, but the mucous membrane on both sides of the septum is the most vascular and is the most frequent site of the hemorrhage. Neoplasms, malignant as well as benign (the latter through a tearing of the vessels on the outer surface), can be overlooked and give rise to confusion, but in most cases the physician, by means of anterior rhinoscopy, can detach the bleeding points. Here it is well to note that several large, often dilated veins, are almost always seen on both sides of the cartilaginous septum, the anterior part, especially in constitutional anomalies, such as arterio-sclerosis, cardiac disease, plethora, etc. Less often but frequently the source of hemorrhages are telangiectasis on the posterior and inferior part of the cartilaginous septum, especially when ridges and spurs are present. In this case these vessels are prone to all sorts of insults, as forceful sneezing and blowing, picking and boring in the nose with finger-nails, etc. It is also at this point that the secretions dry and form crusts, which become adherent, and when torn loose the mucous membrane becomes eroded. It is easy to understand that with such anatomical conditions present, and an additional severe constitutional trouble, a hemorrhage from these parts can easily be produced.

We are also aware of the fact that most of our fellow-men suffer from a more or less developed chronic rhinitis, and as a result there is frequent formations of crusts in the nose and a congestion of the mucous membrane. Considering, for instance, the frequent occurrence of *ozena* and *ozenaluetica*, with the frequent and repeated formation of crusts at the above mentioned points, and their forceful removal, we can easily understand their resulting in excoriations and eczemas. This I have also observed in tuberculosis.

The presence of adenoids, polyps, hypertrophies of the turbinates and mucous membrane of the septum must be considered as fruitful sources of hemorrhages. We know that the adenoid vegetations cause a constant congestion of the nasal mucous membrane and a hypersecretion resulting in the formation of crusts and eczemas, at the anterior nares and anterior part of the septum, thus opening up an avenue for infection. Hence it is that we frequently have recurrent attacks of erysipelas in this location. The veins are in a constantly distended condition as in every condition that goes with fever. It is for this reason that epistaxis is so frequently seen in children. Older people are also subject to chronic eczema of the nasal inlet, resulting frequently from suppuration of the accessory cavities of the nose.

Epistaxis may also be caused by excoriations on the anterior part of the septum (especially when deviations are present) which are the result of traumatism, but no attention is paid to them until hemorrhage takes place. In such cases a tampon which is carelessly applied and removed too early will do more harm than good. A clear view of the nasal cavities should be obtained and the bleeding points sought out and properly dealt with. Other conditions make a careful examination of the nose imperative as we know that new growths, such as sarcomata, carcinomata and papillomata are not uncommon, and frequently

give rise to profuse hemorrhages from the nose. A tampon will control the hemorrhage, but for how long a time?

We have frequently seen profuse hemorrhages from tubercular and syphilitic ulcerations, especially on the septum, which were controlled by tamponing, but on removal of the same the bleeding would set in again. One case in particular I recall in which the anterior and posterior nares had been repeatedly tamponed, but as soon as the tampons were removed the bleeding would start in again as profuse as ever. When I saw him the patient was very anemic. An examination revealed an ulceration on the septum in the region of the tuberculum septi, which proved to be syphilitic. The ulcer was cauterized with nitrate of silver in substance. Potassium iodide was given internally and in three weeks the ulcer was healed and there were no further hemorrhages. Tubercular ulcerations also bleed very easily. They are best treated by cauterization with lactic acid.

Another form of ulceration occurs on the septum which must not be omitted—that is, the simple perforating ulcer resulting from the formation of crusts and removing them with the finger-nails, producing a perforation in the anterior part of the septum. These seemingly unimportant traumas cause an inflammation which extends deeper and deeper, and as a result there is a necrosis of the cartilage, with a peculiar coloring of the part which Zuckerhandel calls “xanthosis.” It is only with difficulty that this process and the accompanying hemorrhages can be controlled. The perforation increases in size and the hemorrhages reappear in proportion with the development of the necrosis. The process is, however, painless, the patients being unconscious of their nasal ulcer.

Foreign bodies in the nose frequently cause hemorrhages, as in the case of children and in the lower classes; also the bites of insects, as mosquitoes, ticks, etc., and the unskillful application of leeches. The latter have also been found in the nasal cavities of boys who had been bathing in ponds.

I do not deem it necessary to specially explain that hemorrhages from the nose occur in fractures of the skull and in traumas inflicted directly to the nose. In such cases the properly applied tampon will answer best.

We shall now deal with the treatment of epistaxis, and first of all will take up the tampon, for it is the general practitioner who will resort to it most often. It must be remembered in applying a tampon that the position of the patient's head must be taken into account. It is usually inclined backward, and often the probe with the tampon material is pushed into the nose in a horizontal plane, thus striking the middle turbinate, resulting in an incomplete packing of the nasal cavity, and thereby allowing the blood to flow back into the posterior nares. We do not take a long, thin strip of gauze and successively pack it into the nasal cavity until the same is filled, and the free end possibly forced into the naso-pharynx, causing retching, vomiting, and even entering the larynx and causing asphyxia, as in a case I once saw.

If we wish to tampon the nose simply and securely through the anterior nares (which can be done), we take four or five folds of gauze, according to the lumen of the nasal cavity, and cut into strips about one inch and a quarter wide by six to ten inches long, and by means of a long, narrow forceps carry the one end back through the inferior meatus to the choanæ, and then pack the upper portion against the middle turbinate, if possible into the middle meatus, thus securely packing the nose. This tampon cannot fall out and will, in most cases, have the desired result. I have never had occasion to resort to the Belloc

tampon. Douglass, of Brooklyn, showed me some tampons which he uses. They are made of cotton which has been subjected to hydraulic pressure, cut into triangular shape, and covered with gauze. When applied the cotton begins to swell and exerts pressure in all directions, thereby gradually but securely packing the nasal cavities. I consider them very practical.

Should it become necessary to pack the posterior nares, it can be best accomplished by means of the well-known method of Belloc. A soft rubber catheter can be used instead of the probe. It should never be forgotten that when the tampon is applied, one should never fail to make a digital examination to see if the tampon is in proper position. The strings with which the tampon is drawn into the posterior nares should both be pulled through the nose and tied over a plug of cotton packed into the anterior nares, and not left in the mouth, as they are very disagreeable and annoying for the patient. However, even with those who are less experienced with the rhinoscope, it will not always be necessary to resort to the tampon in epistaxis. Under the above mentioned cases, when the hemorrhages were due to excoriations, eczemas, ulcers, telangiectases on the septum, the destruction of the vessels or ulcerations with some cauterizing chemical or galvano-cautery can be easily accomplished, and the hemorrhage stopped without any pain or inconvenience for the patient, which is not the case when the tampon is used.

The cauterizing agents employed are chromic acid, nitric acid, trichloroacetic acid and silver nitrate. If nitric acid be employed it must be used with great care, owing to its intense action and the severe pain which may follow its use. Chromic acid can be applied much easier. It is best used by fusing a small bead on a probe (the bead must be red, not green). After cocainizing the part the application is made, followed by an application of a weak soda solution. However, the general practitioner had better make use of a less energetic agent, such as nitrate of silver, which is also best applied by fusing a bead on a probe. The action of nitrate of silver as a cauterant is only a very superficial one, but will answer in most cases. After the part has been cauterized, the after-treatment is a very important factor. In order to avoid the formation of crusts at the point of cauterization, some oily or fatty substance must frequently be used. If this is not carefully carried out until the wound has healed, crusts will form and become adherent, and when removed by blowing the nose, as is usually the case, the bleeding will set up again and our efforts will be of no avail. Frequent applications of vaseline on cotton will answer very well. The electro-cautery can be applied in case the above measures fail, but a red heat only should be used. If possible, the patient should remain quiet for a time.

As tampons, iodoform, dermatol, orthoform, sterile or xeroform gauze can be used, also the Penghawar-Djambi cotton recommended by Noltenius is very satisfactory. M. Schmidt condemns the chloride of iron cotton, on the ground that nasal secretions make it slippery, and therefore will not remain in place.

Every tampon, owing to the congestion of the mucous membrane of the eustachian tube and possible middle ear infection, should not remain in place longer than three days.

Solutions of ferri sesqui chlorati, tannin, ferripyrin (the latter in from 10 to 20 per cent. solutions) can be recommended. Adrenaline, 1-1000 to 1-10000, is of great service, applied locally and administered internally. When the patient is very nervous and excited, a hypodermic injection of morphine or mor-

phine with ergotin will often tide the patient over until other means can be used.

In dyscrasias, owing to the lack of clotting power in the blood, the above measures may be of but little service. In such cases we can administer ergotin, morphine, gelatine injections, transfusions of saline solutions, etc. That one must resort to tampons and general medication, as iron, quinine, arsenic, etc., is self-evident.

After successfully controlling a hemorrhage, it will be necessary to examine the patient for some constitutional trouble, as syphilis, nephritis, cardiac disease, etc. The patient should never be let alone until one is certain that the bleeding is checked and not flowing down into the posterior nares, as is often the case. It will be necessary to caution the patient as to his mode of living, and if any constitutional trouble is present it should receive proper attention. He should be warned about blowing the nose too hard, and especially cautioned as to snuffing up water into the nose.

In conclusion, will add that the possibility of the blood coming from the stomach or lungs should not be forgotten when obtaining the history.

THE X-RAY AS A THERAPEUTIC AGENT—CLASSIFIED REPORT OF FORTY-THREE CASES.

BY JOHN H. DUNCAN, A. M., M. D., of St. Louis, Missouri,

DERMATOLOGIST TO THE MARION-SIMS-BEAUMONT COLLEGE OF MEDICINE, ST. LOUIS, MISSOURI, AND EX-PRESIDENT OF THE MEDICAL ASSOCIATION OF MISSOURI.

Last winter my attention was called by various articles in medical journals to the X-ray as a therapeutic agent, and especially as used in cases interesting the dermatologist. Desiring to see for myself the action of this addendum to our curative measures, I visited Dr. W. A. Pusey, who had for several years used it in his work. The results in some of his cases were so happy and the improvement in others so marked that I decided to use it in my dermatological work. Under his supervision I purchased an instrument, and later a second one, and since then have been using the ray in cases in which I thought it indicated and in some in which I did not think it at the time advisable. I shall not attempt to enter fully into the history of the forty-three cases I here report, as it would make an article unnecessarily lengthy, but will simply classify my work, give results and such other data as I may think the profession at large would like to know. With a few exceptions the patients have been sent me by medical men—men of pronounced ability, whose diagnoses would usually be accepted by the profession. I have in most cases accepted their diagnosis. When it has been possible a microscopic examination has been made, but while that would be most desired, it is impossible in many cases, for the simple reason that patients will not often submit to cutting a piece of tissue from an unbroken surface for an examination. The reader may be skeptical as to the correctness of the diagnosis in all these cases, and the above statement is all the satisfaction to that dilemma I can give.

I have kept a correct record of all my cases, including not only a history, and when convenient, a photograph of them, but the number and length of time of exposures, the distance the tube was held from the part, the character of the tubes used, etc. With this data most any case I have had would furnish suffi-

cient material for a journal article, and in this report of forty-three cases I cannot be expected to enter fully into a detailed description of each one or to even give some points I would desire much to amplify.

Since February 28, 1902, I have treated by the X-ray in private practice a comparatively large number of cases, and the first forty-three have been under observation a sufficient time to warrant me in forming some idea as to the virtue of this agent. For brevity and clearness I have arranged them as follows:

1. *Epithelioma of Lower Lip; Two Cases; Men.*—In one case the lesion was confined to the vermilion border; ulcerated, with induration; lesion about one-third of an inch in largest diameter. Thirty-five exposures were given, from May 12th to July 8th, at which time patient went home. Result, pain ceased, ulcer completely healed and indurated border almost disappeared. Patient promised to return if necessary, but he has not done so.

In the other case the lesion was very extensive, involving not only the vermilion border, but the integument proper of the lip, with marked induration. Fifty-five treatments were given, from April 23d to August 20th, with very unsatisfactory results. On August 20th, with the consent of his nephew, who is a prominent physician of this city, I commenced a series of exposures with the intention of producing a severe burn. I succeeded after four sittings, and the patient is now absent from the city awaiting the result of the burn. About a month after he went home I learned from the physician who is attending him, that "the X-ray has entirely done what would have been necessary for the surgeon's knife to have done; the sloughing of the diseased tissue has apparently been complete . . . the process of healing is almost complete." I might state that both these men were great tobacco smokers. The one that progressed favorably quit it during treatment. The one that did not respond to the X-ray readily would not quit, but used it to excess.

2. *Epithelioma of the Face; Nine Cases.*—Locations as follows:

- (a) Superior maxillary region—Healed and discharged.
- (b) Bridge of nose—Healed and discharged.
- (c) Lower eyelid—Ulcer healed; induration reduced.
- (d) Left zygomatic region—Ulcer healed.
- (e) Left ala nasi—Much improved.
- (f) Left ala nasi—Improved, but still under treatment.
- (g) Superior maxillary region—Healed and discharged.
- (h) End of nose—Healed and discharged.
- (i) End of nose—Healed and discharged.

These cases, with the exception of *a*, were superficial epitheliomas. I used the medium soft tube, with from two to three amperes, exposure lasting from five to ten minutes, and tube held from three to six inches from the parts. In case *a* it was necessary to produce a slough and then healing was perfect. The number of treatments in these cases varied. The shortest number was twelve in case *c*, and the greatest number was sixty-eight in case *f*. These two are still under treatment. Case *a* I feel satisfied will be a success, but in case *f* the left ala nasi is completely destroyed, exposing the septum, and improvement is not satisfactory.

3. *Cancer of the Breast; Five Cases.*—In four of these cases an operation had not been performed, but hard, painful tumors existed. In one case the breast was removed, in 1900, and the cancer recurred in about fourteen months as an

ulceration and disseminated infiltration. In all these cases except one there was marked pain, and in three of them the arm was swollen and painful. The ulcer in the case which had been operated on healed in about three weeks and the tumors in the others diminished satisfactorily. I would like to state here a peculiar fact noticed in almost every case of cancer and in some cases of sarcoma in any locality where local improvement occurred and great pain was experienced, viz., that after a few weeks' treatment the patients would invariably ask if the treatment had any effect on the general health, and when the answer "no" was given, would remark that they felt better than they had for a long time. I have thought that might be due to the relief of pain.

An old lady, seventy-seven years old, with cancer of the breast, the mother of a prominent St. Louis surgeon, whose case progressed most favorably, gained twenty and a half pounds in a short time. I used the medium hard tube in these cases, except that in healing the ulcer, in the case which had been operated on, I used the medium soft tube. The results in four breast cases have been most satisfactory. The fifth one has only been under treatment a comparatively short time, but is progressing favorably.

4. *Sarcoma; Five Cases.*

(a) Osteo-sarcoma of lower jaw.

(b) Osteo-sarcoma of lower jaw.

(c) Small-cell sarcoma of neck.

(d) Small-cell sarcoma of neck.

(e) Myxo-sarcoma of hand.

(a) In case *a* an operation had been performed some months before visiting me. Tumor returned; maxillary articulation was involved, so much so that patient opens mouth with difficulty; pain great. Thirteen treatments given, from April 22d to May 12th. No perceptible benefit either in diminishing pain or reducing size of tumor. Patient discouraged and quit treatment.

(b) Patient had been previously operated on. Tumor returned; inside of mouth was involved. Twenty-five X-ray exposures given, from May 25th to June 23d. No good effect, not even positive relief of pain, though mitigated. Patient quit the treatment and writes me from Texas that he is failing rapidly.

(c) Patient operated on. Tumor returned. Thirteen exposures given, from April 4th to 24th. No good effect, but tumor rather increased in size. Tumor was then removed by the surgeon referring him to me, on account of pain, increasing size of tumor, and pressure interfering with circulation. The wound was not closed by the surgeon, but was healed by the X-ray in ten exposures. Another tumor later was removed from same patient and wound healed by the ray.

(d) Operated on about two years ago and large tumor removed. Tumor returned; large and very painful. Eleven treatments, from August 12th to 25th. Tumor diminished in size and pain not so great. I had some hopes of success in this case, but patient lived at a distance, became discouraged and quit the treatment. Since operated on and died.

(e) This is one of my "brag" cases. The microscopist pronounced it myxo-sarcoma. Young lady, twenty-one years old, was operated on November, 1901, and March, 1902. Wound failed to heal and amputation was considered. The surgeon asked me to try the X-ray. Pain ceased in a few treatments, and

after sixteen exposures healing was perfect. Six months have elapsed since healing and it looks well at this time.

I have no doubt some of my dermatological friends will think had I persevered in the treatment of the above sarcoma reported as not benefited that the results might have been different. This may be true, but the general condition of each one was so much below par and the involvement of structures, superficial and deep, so extensive, and the improvement *nil*, that I could give them no encouragement to continue treatment or assure them of a permanent benefit, and they quit. I believe myself, however, that treatment should have been continued, for we know that sometimes the good effects are not manifested for weeks after treatment is inaugurated.

5. *Lupus Vulgaris; Two Cases.*

(a) Forehead.

(b) Forehead.

(a) Sixteen treatments, from May 22d to June 26th. Ulcerated lesions healed and tubercles broken down and healed. Saw patient August 9th, and still healed.

(b) Patient sent me by a dermatological colleague who desired to watch the effect of treatment. Commenced treatment August 25th. A little early for a final report, but the lesions are disappearing rapidly, and I am satisfied it will be a success.

6. *Cancer in the Mouth (Not Tongue); Two Cases.*—Both cases in men: one about seventy-five years old and the other fifty-six. Destruction of tissue very extensive, especially in back part of mouth; marked cachexia; pain great, and very offensive odor in one case. Nineteen treatments given in one case, from April 4th to May 9th, with no benefit. Patient quit treatment and died July 22d, 1902. In the other case twenty-four treatments were given, from April 29th to May 21st. No improvement; in fact, rapidly grew worse. Quit treatment May 31st, and died in August.

7. *Epithelioma on the Neck; Two Cases.*

(a) Open ulcer on side of neck.

(b) Tumor near angle of jaw.

Case *a* has been treated sixteen times, and the ulcer is rapidly healing. I have no hesitancy in predicting that it will be healed perfectly.

CASE *b*.—This lady had a cancer of the tonsil removed by a throat specialist and surgeon, and some time afterwards an enlargement, hard and painful, appeared near angle of jaw, on the same side as the operation. It was diagnosed, a cancerous gland and sent to me for X-ray treatment. Seventeen exposures were given, from June 17th to July 28th. Pain ceased, enlargement disappeared and patient feels well.

8. *Cancer in Axilla; One Case.*—Arm much swollen and painful; tumors very hard, and attached to bony structure. Thirty treatments, from June 30th to August 28th. Arm less swollen, pain of no consequence, and tumor much reduced in size. At this time the tumor is not diminishing rapidly, and I am seriously considering the advisability of having the surgeon who sent her to me remove the remnant of the tumors, and then heal with the ray. I believe the recovery would be more rapid and the operation now would be insignificant.

9. *Epithelioma of the External Ear; One Case.*—A physician from Southeastern Missouri; lesions confined to concha and anti-helix, external canal not in-

volved. Fifteen treatments, from July 1st to August 25th; much improved; in fact, practically healed. Owing to irregularity of external ear, it is difficult to concentrate rays exactly on parts desired.

10. *Cancer of Larynx; One Case.*—Twenty-three treatments, from June 30th to August 25th. The laryngologist informs me that the tumor has not diminished in size, but rather increased, and ulcerated. Patient says he feels better, and swallowing is less painful after each exposure, but I think that is only temporary, and has an element of hope in it.

11. *Melano-Carcinoma of the Back; One Case.*—A microscopical examination was made in this case before treatment was commenced by an experienced examiner. Thirty-two exposures, from April 8th to May 29th: at that time the improvement was so marked that I only saw patient once in ten days or two weeks. I saw the patient last on June 30th, and his not returning at the appointed time after that, made me suspicious that he was not doing well. I learned he was sick with some stomach and liver trouble. He died August 23d, nearly two months after I last saw him; and one of the attending physicians, who is a well-known microscopist, told me that he died of melanoma of the liver and spleen. I am satisfied he died of the same condition of the internal organs that he had on his integument.

12. *Rodent Ulcer; One Case.*—This patient was referred to me by a dermatological colleague, who at that time had not an X-ray instrument. The destruction of tissue in this case was very extensive. On almost the entire one side of his face the soft tissues were destroyed, exposing the organs in the mouth cavity. Much emaciation, edema of feet, great pain and offensive odor. He was taking fifteen grains of morphine daily to relieve pain. My colleague and I felt that a permanent recovery was impossible, and so told the friends. I treated him thirteen times, from March 6th to 24th. The pain became much less, odor disappeared and granulations appeared. I then returned him to my colleague, who had gotten an instrument, and the local lesions under his care continued to improve, but the man's general condition was such that he was advised to give up the treatment. I might say I never saw the ray act more favorably, and had his general condition been better, some hope might have been entertained for his greater improvement.

13. *Lupus Erythematosus; One Case.*—On side of nose and cheeks. She was treated twenty-two times, from March 7th to May 14th, with great improvement; in fact, lesions disappeared. She then went to New York City for a month, and on her return the parts were still in good condition. As this disease acts oftentimes the same way with other appropriate treatments, I shall see her occasionally, to satisfy myself as to the permanency of the cure.

14. *Tubercular Gland on Neck; One Case.*—Patient sent me by a dermatologist; diagnosis in doubt, but suspecting sarcoma. After seven treatments, with no benefit, I returned him to the dermatologist, who continued use of ray with no improvement. He was then operated on, and a microscopical examination showed it to be not sarcoma, but tubercular.

15. *Cancer of Penis; One Case.*—Man, seventy-seven years old. Penis entirely destroyed; gland in left groin very large and pain intense; odor very offensive. No evidence of penis, except a large granulating mass, through which urine dribbled. Gave him seventy-eight treatments, from April 16th to August 19th; the first six weeks the case progressed favorably; less pain and odor and granu-

lating mass reduced two-thirds in size. After that, treatment seemed to have no good effect, and he was discharged as incurable August 19th. He is now very weak and failing rapidly.

16. *Cancer of Right Side of Nose and Orbit; One Case.*—Tissues of right side of nose and inner half of right orbit destroyed, crowding eye upward and outward, which is almost completely encased by remnant of eyelids growing together. This lady commenced treatment August 14th, and has had eighteen exposures: it is too early for a final report, and while I do not anticipate a permanent recovery, still even in this case, which is inoperable, the pain and odor have disappeared, the disease has not progressed, and the tissues have a healthier appearance. I am fearful the disease is also intracranial.

17. *Eczema of Popliteal Space; One Case.*—Erythematous-squamous lesion confined to right popliteal space. I had treated this patient for six months, before commencing the use of the X-ray, as these cases are usually treated by dermatologists, with varied results, but never a complete amelioration of symptoms. Noticing a few reports of chronic, localized, infiltrated eczemas cured by the ray, I applied it to this case. She had seventeen treatments, from May 22d to August 21st. After six or seven treatments the itching became much less, the infiltration began to diminish, and the part to all appearances improved. The good effects subjectively and objectively continued with each treatment, and for a long time I saw her only once a week. I have now discharged her, but she has promised to visit me once a month, as I desire to see whether the cure is permanent or not.

In this case I produced a mild dermatitis.

I do not wish the reader to understand for a moment that I recommend the X-ray in the treatment of eczema, but it may be that it is useful in a thickened, infiltrated, localized patch.

18. *Hypertrichosis; One Case.*—I have had a number of opportunities of using the ray in removing hairs from the face, but I have declined them all until I could for myself see (1) if it would remove them; (2) if removed would they return; (3) is the dermatitis produced sufficient to leave the part permanently pigmented or erythematous. If the treatment is successful as regards the first two points, and the third exists after their removal, I do not care to use it for that purpose on the face.

Fortunately, I had a most appropriate case for my investigation. A lady from whom I had removed a growth of hair from the face several years ago by electrolysis, noticing that the X-ray was being used for that purpose, consulted me about removing them from her legs. I must say that the growth of hair from the knees to ankles was most abundant. I explained the newness of the treatment, the uncertainty of the results, and the possible permanent pigmentation, and she decided to be treated, which pleased me very much, as I here had a case in which a failure or subsequent pigmentation was of little consequence. I used a medium soft tube, held it about three inches from the part with five minutes' exposure to each region treated, treating only the tibial portion of the legs. After fourteen exposures I noticed a folliculitis, and after twenty treatments a marked diffused dermatitis over all the parts exposed. Treatment then ceased. Three weeks thereafter the dermatitis had disappeared, and all the hairs over the region treated had fallen out, leaving some slight pigmentation; this latter, however, faded gradually and legs now are about their natural color. Eight weeks have

elapsed since the hairs disappeared and there is no evidence of new hairs growing. I am now treating other regions of the legs, but not so vigorously, and will see if I cannot succeed in removing the balance of the hairs without producing the marked dermatitis that I did at first.

19. *Acne; One Case.*—I was consulted by a young man with acne on his back; very pronounced. I tried to dissuade him from having it treated at all, but he and his father insisted on something being done. I had never used the ray on my acne patients, but as I had noticed where a number of cases had been cured by this method, I felt here was a favorable case for my first experience before using it on the face. I attempted to produce a mild dermatitis, which I succeeded in doing after fourteen exposures. Treatment then ceased and he went north on a fishing trip; returned in three weeks; dermatitis gone; no papules or pustules on parts treated, but *marked* pigmentation. He then went on a trip to Canada and returned in about a month, at which time papules and pustules had not reappeared and pigmentation *very slight*, hardly noticeable.

As in eczema, let me say I am not recommending this treatment in acne, for our idea of its etiology is such, and especially knowing that systemic derangements influence its course, I cannot understand how this treatment would produce permanent, good results, though they might be temporary. The young man has promised to occasionally let me know how he is getting along.

In addition to the above cases, which come naturally under the care of the dermatologist, I was prevailed upon early in my X-ray work by brother practitioners to accept four cases of cancers of internal organs. Such cases are outside the domain of the dermatologist, and I did not want them, but as the treatment is comparatively new, and the profession desired to see the effect on such cases, I acceded to their request.

20. *Cancer of Stomach; Two Cases.*—Ladies, each about fifty-seven years old; tumors easily detected; hard, and pain great; much emaciation; cancerous cachexia. One patient was treated forty-three times, from May 12th to July 14th. At first there seemed to be some mitigation of pain, general condition improved, and tumors lessened in size. However, after first month's treatment improvement in every respect ceased and patient gradually grew worse and quit treatment. Since died.

The other patient was so weak and emaciated that she with difficulty came to the office even with two persons to assist her. I declined to treat her, but the attending physician and her husband insisted on a trial of the X-ray. She had eight treatments, with no benefit whatever, rapidly grew worse in every way, and I finally succeeded in persuading her husband not to continue the visits. Since died.

21. *Cancer of Uterus; Two Cases.*—In one the body of the womb and appendages were involved; much emaciation and pain. Surgeon refused to operate. Twelve treatments through abdominal wall, from June 21st to July 12th. No improvement; gradually grew worse and quit treatment. Since died.

In the other case the lesion was confined to the os and neck of the womb. Woman fairly well nourished, and a most typical case for a radical operation, but I could not get her to let the surgeon operate. I treated her per vaginam. When she commenced treatment there was great pain, parts bled easily, introduction of speculum painful, and introduction of probe followed by a rather copious flow of blood. She was treated twenty-eight times, from June 17th to

August 15th. After two weeks' exposure she showed marked signs of improvement in her general condition, also in absence of pain and discharge. Improvement continued with each treatment and August 1st she went home. She now returns once a week. The local lesion to all appearances healed, no pain, no discharge, introduction of speculum painless, and no blood on introduction of probe. This lady lives in the interior of the state, and while I feel the treatment has been most beneficial in every way, I would like to see it continued occasionally indefinitely, as it would be of great interest to the gynecologist.

A careful examination of the above cases will show that of the forty-three cases, twenty have been discharged healed, and to all appearances cured; eight have shown marked improvement—in fact, so much so that six of them can be discharged cured in a short time, and I have hopes for one of the remaining two; fifteen have failed to show any permanent improvement and have quit the treatment at my suggestion or with my approval, and to my knowledge seven of the fifteen have died since treatment was suspended. The percentage of successes could have been much increased had I been permitted to exercise my judgment and inclination and refused to treat at least ten of the fifteen that I have reported as not benefited at all; three of the ten were cancers of internal organs. However, at the earnest solicitation of the friends of those ten, and of the medical attendants, I treated them as a last resort. I guess this course was justifiable, as we do not know as yet exactly all the conditions in which it is applicable. We are, however, slowly learning to discriminate, and after awhile the therapeutic use of the ray will be limited to its proper sphere.

From my experience in radiotherapy I am convinced—

(1) That while it is not a panacea, and will not relieve all cases of any *one* kind of lesions, its value as a therapeutic agent is unmistakable, and most valuable when properly used.

(2) That the sooner the disease is treated after it makes its appearance the more success we may expect.

(3) That those scientifically using the treatment should refuse to take patients even when they have every reason to believe they would be benefited, unless the patient can agree to be with the operator at least three or four weeks, for while improvement often is manifested after a few treatments, sometimes it does not show itself for several weeks.

(4) That it is often palliative in inoperable cases and rids the patient, if only temporarily, of great pain.

(5) That after an operation for a malignant growth the healing of the wound by the X-ray is beneficial, in that diseased tissue which probably may have escaped the knife is destroyed by the ray during the healing process.

(6) That the operator must especially understand his tubes and not indiscriminately use tubes of great and slight resistance.

(7) That sufficient time has not elapsed for us to say that the lesions will or will not return; but suppose they should return in six or twelve months or a longer time, is it not easy for the patient to undergo the same treatment, and probably get the same relief? Thus far, however, I may say that relapses have been very rare with those who have used the treatment longer than I have.

(8) That in superficial epithelioma, lupus of both forms, especially vulgaris, cancer of the breast, and sarcomas of some forms (not osteo), the ray is very beneficial, and in the great majority of cases curative.

(9) That in the treatment of cancers of internal organs judgment must be suspended until further experience and perfection of the apparatus.

Century building.

PLEURISY AS ASSOCIATED WITH TUBERCULOSIS.

BY JOHN HUNTER, M. D., of Toronto, Canada.

In the medical literature of pulmonary diseases, for decades before the discovery of the tubercle bacillus, there are to be found many evidences, if not of an assured faith, at least of a strong suspicion, that there exists a special relationship between pleurisy and tuberculosis—the latter being an exciting or predisposing cause of the former. Clinical experience and pathological research were too strong to allow the very frequent association of these diseases to pass as a mere coincidence.

The discovery of the tubercle bacillus in 1882 gave to bacteriology the mission of establishing the true relationship that exists between these diseases, and the years that have intervened since then have been utilized for this purpose. Three lines of investigation have been systematically followed: (1) *Microscopical examination* of the exudate in pleurisy—bacilli have been found in the exudate as well as in cultures made from it. It is true that the serous exudate is often sterile, even in cases of assured tuberculosis; but this fact in itself is now looked upon as being suspicious of a tuberculous origin, since numerous bacteria are to be found in the exudate of pleurisy due to cold, traumatism or other non-tubercular causes. The bacilli are to be found not only when the exudate is serous, but also when it is fibrinous or purulent. (2) *Inoculations*.—The results obtained by this test—when a fairly large quantity of the exudate has been injected—have been of the most positive character. Experiments on guinea-pigs have given results such as the following: Where a tuberculous exudate was used, fifty per cent. of positive results were obtained. In cases where the pleurisy was attributed to cold, forty per cent. of the animals became tuberculous. In cases where the pleurisy was evidently due to other causes, *e. g.*, traumatism, pneumonia, etc., the results were negative. In one experiment the inoculations were made from fifty-five cases of pleurisy, and eighty-five per cent. of the animals developed tuberculosis. In fifteen cases of pleurisy in which the tuberculin test was used, eighty-seven per cent. of these gave the general and local reaction. (3) *Clinical Evidence*.—Here, also, the evidence that a very large percentage of the cases of pleurisy are of tubercular origin seems indisputable. In recent text-books on the practice of medicine and in medical journals series of cases have been published, such as these: In fifty-seven cases of pleurisy, twenty-one died of tuberculosis within ten years. In one hundred and thirty cases of primary pleurisy, forty per cent. became tuberculous within seven years. In ninety-two cases of pleurisy, twenty-three died of tuberculosis within two years; forty-three had either definite tuberculous disease of the lungs or signs suggestive of it, and only twenty-one appeared to be healthy. In a collection of three hundred and ten cases of pleurisy, one hundred and seventy-eight, or fifty-seven per cent., subsequently developed tuberculosis. In sixteen cases of fatal pleurisy, in which the subjects were healthy before the attack, on *post-mortem* examination miliary tubercle were found on the pleura in every case. Coming now to personal experience, I am sure I can safely state that every physician, who has had a number of years in practice, can recall to recollection many cases of primary pleurisy that were soon followed by tuberculosis. How often have we sent away our pleuritic patients with a benediction and an assurance of their complete re-

covery, only to have them return to us a few months later the victims of tuberculosis and the dupes of a misleading prognosis. If we take all these facts into consideration, are we not fully justified in stating that far more than fifty per cent. of all cases of pleurisy with effusion are due to infection by the tubercle bacillus? The conclusion has been arrived at from the writings of such authors as I have been able to consult, from opinions expressed by many of my confreres in Toronto, as well as from personal experience extending over more than a quarter of a century.

CLINICAL FEATURES.

1. *Primary Tubercular Infection.*—There is often a marked contrast between the physical type of those cases in which the pleura is first invaded by the bacilli and those when the first manifestations of tuberculosis appear in the pulmonary tissues, the former often presenting the highest type of physical development, whilst the latter are usually wanting in physical stamina. It is quite a common experience, when called to attend a healthy looking young man or woman, to find symptoms that at once direct attention to the pleura as the seat of the disease. These symptoms may be briefly summarized as follows: The sudden onset of acute pain, which is most frequently located in mid-axilla or mammary region; a short, hacking cough that greatly intensifies the pain; shallow respirations, increased somewhat in frequency; an elevation of temperature from one to three degrees. This febrile disturbance affects the vascular and digestive functions. Within a few hours, or in some cases at a longer interval, a serous, or more frequently a sero-fibrinous, exudate is poured out into the pleural cavity. The exudate, if serous, may be so limited in quantity as to merely moisten the surfaces of the pleura, or to form a thin layer, if fibrinous, and thus cause the pleural surfaces to adhere together throughout or in patches. In other cases the exudate, especially when serous, is poured out rapidly and in such vast quantities as to expand the thoracic walls, compress the lung into a small, compact, airless mass, and displace the heart. The exudate may contain the following constituents: serum, fibrin, pus, blood, and the various micro-organisms and their products.

The seat of the most acute pain may be very misleading, owing to the nerve supply of the lower portion of the chest extending over the upper part of the abdomen. Many patients have been treated for stomach or liver trouble, when the pleura was the actual seat of disease.

The respiratory and cardiac distress is often extreme when the amount of effusion is very great.

Another interesting feature, especially characteristic of the tubercular cases, is the rapidity with which the pleural cavity refills after the fluid has been removed. In twenty-four, forty-eight or seventy-two hours the dullness may be about as extensive, and all the other symptoms about as well marked as before the removal of the fluid.

The further progress of these acute cases is largely governed by the quantity and character of the exudate. If fibrinous bands have been thrown across from the parietal to the visceral surfaces of the pleura the exudate may be contained in a series of small cavities. If the exudate become purulent the pus may remain encysted, or it may be discharged through the thoracic walls, or into a bronchus, or into the peritoneal cavity. If serous or hemorrhagic, it may be completely or partially absorbed. If fibrinous, the pleural surfaces become

adherent. Whilst these changes are going on a very large percentage of these acute cases become affected with pulmonary tuberculosis.

When death takes place during the acute stage it is usually due to either the extreme compression of the lungs or displacement of the heart by the exudate. Other causes of death are exhaustion and septic poisoning from the absorption of the morbid products formed in the exudate by the action of certain bacteria.

2. *Secondary Tubercular Infection.*—Pleurisy is simply a complication of pulmonary tuberculosis in quite a large percentage of the cases ordinarily met with in general practice. In a much smaller percentage of cases the pleurisy is due to tubercular infection in the cervical, lymphatic glands, peritoneal cavity, or elsewhere in the body. In these tubercular subjects the onset of pleurisy as a complication usually intensifies the symptoms present. The pain is more acute and persistent. The patient often complains of "my side being always sore." Cough becomes more irritating and painful, respirations more shallow and frequent, emaciation, exhaustion and mental depression more marked. The temperature, especially if the exudate becomes purulent, assumes the hectic type. The dullness becomes more absolute, the dyspnea and cardiac distress increase with the amount of effusion. When the exudate is sero-fibrinous and sterile, and only in sufficient quantity to exert some pressure, thus restricting the expansion of the lung in which the bacilli have set up inflammatory action, the result may be very beneficial, as in this way rest is afforded to the inflamed lung tissues.

Etiology.—The bacilli or their products can reach the visceral layer of the pleura through the subpleural, bronchial or tracheal lymphatic glands, and the parietal layer, from the cervical, vertebral, mediastinal and peritoneal lymphatics. The tonsils and other glandular structures in the mouth and throat can lodge the bacilli and transfer them into the lymph channels. The pleura can be very readily infected from a tuberculous lung. Traumatism may render the pleural tissues much more vulnerable to tubercular infection. In brief, any causes that impair health may be more or less potent etiological factors in predisposing to tubercular pleurisy.

Diagnosis.—The personal experience of all the members of the profession who may read this paper, the ready access to the very full descriptions of the symptoms and physical signs of pleurisy given in the text-books, as well as to what has been stated already in the preceding pages, render unnecessary any further discussion under this head. All I wish to add is to emphasize the extreme importance of the physician making a most vigilant search for a possible tuberculous origin in all cases of acute primary pleurisy unless where obviously due to traumatism or other non-tubercular causes. It is not always necessary, or even generally prudent, to acquaint the patient of such a suspicion, but if the physician be governed by it himself it will perform the function of one of the modern powerful electric head-lights in use on the engines on our trans-continental "flyers" that "race with the lightning from ocean to ocean." A strong conviction of a tubercular origin in our cases of pleurisy will not only make us more guarded in our prognosis, thus saving us from the deep humiliation our errors in bygone days were wont to inflict upon us, but it will throw a bright light far along our line of treatment.

Prognosis.—The results in tubercular pleurisy often bring upon the physician the opprobrium the surgeon is so frequently called upon to endure, when it is face-

tiously said that "the operation was a brilliant success, but it did not save the patient." The pleurisy may be relieved, but the patient succumb to tuberculosis.

The outlook is not always gloomy. When the disease is confined to the pleural surfaces, and proper treatment carried out, the prognosis is much more favorable than in pulmonary tuberculosis, for serous membranes, such as the pleura and peritoneum, are much less vulnerable to this infection than are many of the other tissues. In Osler's *Practice of Medicine* it is stated that "the subsequent history of cases of acute pleurisy forces us to conclude that in at least two-thirds of the cases of tubercular pleurisy it is a curable affection." I think when the etiology of pleurisy is better understood we will be able to look forward very hopefully for a still larger increase in the number of absolute recoveries from the effects of this disease.

Treatment.—If the following statements be true, and at present the evidence seems conclusive, (1) that the vast majority of all cases of pleurisy are due to tubercular infection, and (2) that tubercular infection when confined to serous membranes is by far the most curable of all infections from this source, the general principles of treatment are well defined. The patient should be placed in the best possible environment in regard to dryness of soil, elevation and abundance of pure air and sunshine. No cheaper or better accommodation can be found than a suitable tent, pitched on the southern slope of a moderately high hill. The pain can be relieved by external applications. Some prefer to use ice bags, but most patients find heat—dry or moist—more agreeable. Cough, beyond what may be required to remove serum from the bronchial tubes, should be relieved, as it not only increases the pain, but also irritates the inflamed surfaces. The functional activity of the skin, bowel and kidneys should be increased. The temperature can be regulated by cold drinks, tepid or cool sponge baths and by use of antipyretics. Special attention must be paid to the position of the cardiac impulse. Any impairment of the heart's action calls for extreme caution in the use of such depressants as the coal-tar preparations. The judicious use of stimulants and heart tonics is of great importance. The patient should be strictly confined to the recumbent position during the febrile stage, and especially if the heart's action be impaired. The question of diet calls for the most careful supervision. In the febrile stage milk and nutritious broths, and later as much of the most nutritious food as can be digested. Every possible effort should be made to keep the patient well nourished and his strength maintained. Hunger, fatigue, sleeplessness—in brief, all depressing influences—should be most scrupulously guarded against when the patient is able to be out. If there is any pain or soreness about the chest, dry cupping or small "flying" blisters may be used. During convalescence deep breathing should be practiced very assiduously. The inflation of rubber bags is a valuable exercise. Change to a more suitable climate should be insisted upon if the progress toward recovery be retarded. A high, dry elevation is desirable where frequent and deep respiration is a necessity on account of the rarified air.

The question of when to interfere in the removal of the effusion is often a very perplexing one. In many cases, when the fluid is serous or sero-fibrinous, quite large quantities of it may be more or less rapidly absorbed. When the dyspnea is not urgent and the cardiac impulse in normal position, it is prudent to wait, although the quantity of fluid may be quite extensive. The restriction

of fluids and the use of saline cathartics, diuretics, diaphoretics, lung gymnastics, massage, dry cupping and a series of "flying" blisters may be tried to help in the absorption of the fluid.

Fowler lays down the following indications for paracentesis: (1) When there are signs of positive intrathoracic pressure; (2) when the following symptoms which usually accompany the above condition are present—a small, irregular pulse and urgent dyspnea, palpitation on slight exertion, lividity, or evidence of engorgement, and edema of the opposite lung. These symptoms may, however, be absent in cases accompanied by positive intrathoracic pressure so long as the patient is lying perfectly still. (3) When the fluid has been ascertained to be purulent its removal is necessary in all acute cases.

It may be necessary to remove the fluid more than once, but only a few repetitions can be borne by the patient without impairing his strength.

In aspirating strict antiseptic precautions must be observed. The needle or the canula—if a trocar be used—should be about one-tenth of an inch in diameter and about three inches long.

The positions usually selected are the interspaces between the sixth and seventh ribs in the mid-axillary line, or between the ninth and tenth, just outside the line of the angle of the scapula. The fluid should be withdrawn slowly and a careful watch kept on the action of the heart and respiratory movements. On the occurrence of urgent dyspnea or faintness the flow should be stopped and stimulants given. When evacuation is complete or sufficient relief given some antiseptic dressing should be securely fastened over the puncture. The evacuation of a purulent exudate belongs to the domain of general surgery.

CLINICAL REPORTS.

A CASE OF SIMULATED MOTOR APHASIA.

BY SIDNEY I. SCHWAB, M. D., of St. Louis.

This case is of interest chiefly from the point of view of diagnosis. It illustrates the difficulty which may lie in the differentiation of hysteria, simulation and organic affection. The case further demonstrates the importance of seeking for a motive in all cases in which the diagnosis of simulation is at all probable, for the existence of a motive is always necessary before such a diagnosis is justified.

Mrs. F., aged thirty-seven years, was brought to the Neurological Department of the Jewish Hospital Dispensary by her husband, who reported that at two o'clock the preceding day she had suddenly lost the power of speech, although she understood what was said to her and attempted to respond by gestures. There was no history of a psychical shock or trauma of any kind, and the husband reported that he knew of no cause for the present condition. The patient appeared much depressed and frightened. The clinical history gave very little data towards the explanation of the case. The patient had been in fair health with the exception of an attack of temporary unconsciousness, dating about six months earlier. The vague reports concerning this attack threw little light upon its nature; in all probability it was either simulated or hysterical. No seizure similar to the present one had been observed. The patient was in no way subject to hysterical attacks or convulsions. The physical examination showed the following: The internal organs were negative. The muscular strength on the right side considerably below that of the left. The grasp of the right hand was very feeble as compared with the left. In spite of the apparent hemiparesis of the right side there was no defect in gait. Sensation was difficult to test, owing to the patient's inability to answer questions. There seemed, however, to be nothing abnormal. Reflexes: Both knee-jerks increased, but no clonus; the pharyngeal and abdominal reflexes normal; pupils normal; vision apparently good. An examination of the cranial nerves showed a slight but definite paresis of the seventh on the right and the hypoglossus on the same side. The tongue turned sharply to the right upon each protrusion. The right naso-labial fold was absent; the corner of the mouth on the right side was lower than on the left. The upper facial seemed normal. Speech: There was absolute motor aphasia, with a perfect understanding of spoken and written words; the patient recognized objects perfectly. The usual tests were made, and beyond the patient's inability to speak, no other speech defect was found. She was sent to the Jewish Hospital for further examination, and was kept isolated. While there an examination of the urine was made, with normal findings. Beyond absolute quiet and seclusion no treatment was given. The next day she began to speak, and in forty-eight hours her speech was perfectly restored. Facial paresis, as well as the right-sided muscular weakness, and the apparent hypoglossus paresis disappeared likewise. She was then dismissed from the hospital.

At the time of the first examination, a diagnosis of simulation was thought probable. Hysteria was excluded on account of the absence of any other object-

ive signs. The possibility of some organic lesion in the speech center was considered carefully on account of the apparent paralysis of the facial on the right side and hypoglossus. The possibility of some organic lesion in Broca's convolution was suggested by the foregoing symptoms, but was excluded for the following reasons: 1. Such a complete motor aphasia could result only from a very extensive lesion. Such a lesion affecting the speech center would naturally cause other disturbances. 2. The aphasia was so complete and exaggerated, and limited to the single element of verbal expression, that its very completeness made the diagnosis improbable. There was left then the diagnosis of simulation. In order to make this diagnosis a motive must be discovered. It was subsequently found that the patient desired financial assistance from the charity organization controlling the hospital, and had used this means to accomplish her purpose. The unusual simulation in this case of symptoms of the paralysis that is often complicated with motor aphasia is worthy of note. The motor aphasia accompanying apoplectic lesions of the internal capsule involving the island of Reil on the left side frequently presents a clinical picture not unlike the case here described. Whether it was purely a coincidence in this case or whether the patient had actually observed a case of motor aphasia, with right-sided paresis, is an open question. This case further demonstrates the fact that a seemingly functional symptom-complex may be accompanied by seemingly organic symptoms without invalidating the diagnosis of the former.

CASES OF CHRONIC APHTHOUS STOMATITIS.

BY HENRY WALD BETTMANN, M. D., of Cincinnati.

Chronic aphthous stomatitis is a disease which is not described in the textbooks on diseases of the mouth. During the past two years three cases have come under my observation. The histories in all three cases are practically the same. The essential disturbance in all is the constantly recurring appearance of aphthous ulcers on tongue, lips, cheeks and gums. The ulcers do not differ in any respect from the typical aphthous ulcer as ordinarily seen. They are very painful; they vary in size from that of a pin-head to eight or ten times as large; they have the grayish white base surrounded by a reddish margin; they tend to heal in from four to seven days. Scarcely has one crop healed, however, before a second crop makes its appearance, and this process may be repeated without intermission for months and years. All my patients have been adult males without a history of syphilis.

CASE 1.—D. B., aged forty-six years, merchant, came to me for treatment in the summer of 1901. For five years he had suffered from the practically continuous presence of aphthous ulcers in the mouth. He had tried various forms of treatment without marked benefit; only once during the five years did he enjoy immunity for more than a few weeks at a time. He was naturally of a nervous temperament, and had smoked to excess. Abstinence from tobacco for a year availed nothing. He had been told that his trouble was due to excess of uric acid, and had been dieted and placed upon alkalies; all without benefit. Treatment at various saline springs had done no good. My examination revealed no striking abnormality. Physical examination was negative. The saliva was normal. The urine was normal. A very slight degree of anemia existed. Hb

80 per cent. The gastric juice was hyperacid, containing 0.22 per cent. free HCl. Total acidity, 0.3 per cent. The slight hyperchlorhydria was the only clue to treatment. I placed him on a diet free from vegetable acids, forbade tobacco and all alcoholic beverages, and prescribed for him a mixture of magnesia and soda. He was instructed to wash his mouth twice daily with the following excellent mouth wash (formula of which was originated by Dr. Miller, of Berlin:)

R	Acidi benzoic	}	.....aa	3.0
	Saccharin			
	Ol. Cinnamon		.....	1.0
	Alcohol		.....ad	100.0
M. S.—One part to ten of water. Mouth wash. Hold in the mouth at least one minute.				

His stomach was washed out at first three times a week to prevent any local irritation, but as the gastric mobility was very good the lavage was gradually abandoned. This treatment proved beneficial from the beginning, and was continued for nearly six months. During the last three months of treatment the patient was entirely relieved of all trouble. Since December, 1901, to date (a period of ten months), his mouth has remained free from all disturbance.

CASE 2.—Mr. X., merchant, aged forty-two, came for treatment in 1890. Had been troubled with exceedingly painful eruptions of aphthous ulcers almost continuously for sixteen years. Smoked considerably. Did not use alcohol in any form. Was robust and considered himself in excellent health except for slight gastric disturbance. The tongue was frequently coated, and bloating and belching after meals were often annoying. Examination revealed no abnormality in the blood, urine, or in any of the organs. The gastric juice was hyperacid, containing 0.08 per cent. free HCl. There was slight gastric catarrh. The above-mentioned mouth wash was prescribed, lavage was recommended, and a proper diet was prescribed. Tobacco was forbidden. The patient refused to submit to lavage systematically, but used the mouth wash for a time without marked benefit. He then disappeared from observation. In August, 1902, he returned for treatment, the aphthæ having appeared without intermission since the time of his last visit. He still refused lavage. I placed him on a diet free from all acids, fruits and fried foods; ordered cholagogue and saline laxatives systematically; again ordered the benzoic mouth wash, and though the patient is still under treatment his improvement during the past month has been very marked and no ulcers have appeared during the past three weeks.

CASE 3.—Male, adult, the resident of a neighboring city. Gave a history of having suffered many years without intermission from crops of aphthæ. I advised him to follow a plan of treatment as outlined above, but he passed from observation after his second visit.

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EDITED BY

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OTHO F. BALL, M. D. Managing Editor.

COLLABORATORS:

MAX MICHAELIS, M. D.,
Docent of Internal Medicine, University of Berlin, Germany.
FRANZ NEUGEBAUER, M. D.,
Professor; Director of the Evangelical Hospital, Warsaw, Russia.

JULIUS NEUMANN, M. D.,
Docent of Obstetrics and Gynecology, University of Vienna, Austria
JULIUS SCHNITZLER, M. D.,
Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,
Berlin, Germany.

Address all communications to the INTERSTATE MEDICAL JOURNAL, LINMAR BLDG., ST. LOUIS, MO.

EDITORIAL COMMENT.

“WHAT ARE MEDICAL LIBRARIES GOOD FOR?”

It would appear, at first thought, that this question was of a purely academic character; that forming a subdivision under the general theme, libraries, its proper sphere of discussion would be upon the floor of a debating society; that, in short, for the practitioner of medicine, or in the editorial columns of a medical journal, it would be rather curtly dismissed as superfluous.

It is an interesting fact—indeed, an unfortunate fact—that this question, in St. Louis, is not merely of academic interest, but has assumed a vitally practical phase. The simple statement that out of some 1800 physicians resident within the confines of St. Louis, but 155 are members of the St. Louis Medical Library, suffices “to point the moral,” but *fails* “to adorn the tale.”

It is a *practical question*, for upon the solution of the problem depends the ultimate success, or failure, of the St. Louis Medical Library.

It is an *interesting question*, for the attitude of the medical profession of St. Louis toward the St. Louis Medical Library furnishes a valuable diagnostic clew to the relative scientific standard of the medical profession of St. Louis in the medical world.

Is it a fact that medicine is not, as yet, an exact science?

Is it a fact that, to a very large degree, it is based upon theory?

Is it a fact that these theories undergo change and development, and that the untenable theory is finally discarded?

Is it a fact that the evolution of a theory up to a certainty is accomplished by investigation?

Is it a fact that the minutes of progress are recorded in the literature of medicine?

Is it a fact that a library is the depository of the literature of medicine?

If such be *facts*, it surely must be conceded that the physician, in sheer self-defense, if upon no nobler basis, is obliged to be in close touch with a competent medical library.

Numerous methods naturally suggest themselves by which a man may remain abreast, or, in the isolated instance, measure a stride in advance of the march of medical progress. Their claim granted, it yet remains that the literature in accessible form must be at the command of the student of medicine, the general practitioner, the specialist, the man of research, the teacher; in other words, *the medical man*.

How often is it to be observed that the enthusiastic inventor of an instrument, an operation, some bit of laboratory technique, or some special form of diagnosis or plan of treatment, has his o'ersanguine expectation of fame quietly but absolutely checkmated, in the brief reference to a former worker, at the hand of a student of the literature.

What an enormous amount of work would be saved, what half-baked theorizing would be smothered, what tomes of mere verbiage would be sacrificed, what a refreshing hiatus in the proceedings of medical societies would ensue, if the medical man was familiar with the literature?

The general text-book is of value to the medical student; the journal and the monograph are unostentatiously but steadily supplanting it as pabulum for the scientific worker. It follows that a large collection of general text-books, but in particular a large file of the best journals and monographs constitutes an essential factor in the life and work of the up-to-date medical man.

Unless a man is possessed of most restricted requirements, on the one hand, or a comparatively luxurious income on the other, his individual library will prove sadly inadequate for his daily needs. It seems most obvious that a common library, deriving its support from the combined dues of its subscribers (supplemented when feasible by endowments), affords the logical solution of the problem. In no field do the principles of co-operation and centralization find a more beneficent exemplification.

It has been rather generally conceded among the medical libraries of America that the Index System of the St. Louis Medical Library is not only up-to-date in its plan and scope, but is, in fact, distinctly in advance of all competitors. Among other advantages worthy of note, from one hundred and eighty-eight journals on the shelves of the library, sixty-one have been selected by the officers of the library as representative of the best medical thought and work of to-day. *All the original articles of these sixty-one journals are indexed.* So that the busy practitioner, as well as the freshman, the medical dilettanti as well as the scientific worker has here at his ready command the cream of the literature of the medical world.

Membership in the medical library may be secured for an annual fee of five dollars—*the price of one medical journal*.

RADIOTHERAPY AS A THERAPEUTIC AGENT.

Radiotherapy, although a remedy of great therapeutic value in certain malignant conditions, is yet a dangerous agent, not only from the effects of its irritant or burning qualities, but from the erroneous impression as to its unlimited curative powers which is at present extant among the laity. Brilliant results from its use have only been obtained in those less malignant and superficial neoplasms which affect the skin primarily. Deeper carcinomatous growths covered by intact epidermis have at best only been benefited, judging from the reports. There lurks in the breast of all of us an experimental vein which, together with the patient's dread of the knife and his desire for a less radical procedure, often leads us into error; into "employing" a remedy which is largely experimental and which consumes time when our better judgment and experience would suggest the more radical or cutting operation. Thus a warning should be sounded. The X-ray operators should report their failures as well as their successes and place them in an unprejudiced light before the profession. A new remedy is often lauded for what it does not deserve, thus often bringing it into ill-repute when it is of the greatest value and assistance in certain selected cases. This is no doubt true of the X-ray. It fills a therapeutic gap in its curative effect upon superficial malignant ulcers, relief of pain, odor and discharge in inoperable cases, and its beneficial action in certain skin diseases. But in deeper carcinomata, where extirpation is possible, the reports of radiotherapists do not encourage its use.

Probably the most dangerous element in the use of the rays is that it is falling into the hands of unprincipled practitioners and quacks, who quote in their glib and inaccurate fashion radiotherapists of known repute. In this lies the greatest possible danger. Therefore, reports tending to show the true limitations of X-ray therapy are now of the utmost importance.

PULMONARY GANGRENE AND ACID-PROOF BACILLI.

Pulmonary gangrene is commonly understood to be a secondary condition in all cases, never primary. Among the causes to which it is usually taken to be secondary are pneumonia, tuberculosis and carcinoma, with wide-spread inflammations and interstitial and alveolar hemorrhages. Emboli of infection may cause it. Inspiration of fetid substances also may cause it. These are the causes commonly catalogued by the pathologist as playing a role in the production of this condition. In this connection, Ophüls reports in the *Journal of Medical Research* for June, 1902, five cases in which pulmonary gangrene was found at autopsy. During life and at the autopsy he found in each case an acid-proof bacterium, which decolorized with alcohol and hydrochloric acid mixture, but which was acid-proof to 25 per cent. sulphuric acid solution. He was unable to obtain a growth of the organism in any case. Though some variation existed in the morphologic characteristics of these several organisms, he concluded that they were all members of the same class, and that they had participated in causing the pulmonary gangrene. Mayer, a German military surgeon stationed in China in 1901, mentions even more interesting cases (*Briefe aus Ostasien, Muench. Med. Wochensch.*, 1901, 1775). Among his patients he found an unusual number of cases of pulmonary gangrene. In fifty-eight examinations in cases supposed to be tuberculous, he found in ten cases acid-proof bacilli which were

not tubercle bacilli, and which he classed as streptothrices. In the one case in which there was necropsy, he found a limited area of pulmonary gangrene. Fraenkel and Pappenheim called attention to acid-proof bacilli in cases of pulmonary gangrene. The well-known observation of Rabinowitsch may also be cited as showing that some cases supposed to be tuberculous are due to an acid-proof bacterium.

These observations are of intense interest, not only as a pure matter of observation on the part of the pathologist, but as having considerable bearing on the present method of quickly diagnosing tuberculosis of the lung from a sputum examination. Pathologists have long since held that pulmonary gangrene is mostly secondary to tuberculosis of the lungs, because an acid-proof bacterium, resembling closely the tubercle bacillus, has been found in the sputum. Here we see in these observations that an acid-proof bacterium was found in the sputum and in the lungs in every instance, and yet neither was the bacillus the tubercle bacillus, nor was the condition with which it was found associated tuberculosis. More care should be taken by the clinician in his routine sputum examinations, so that differentiation between this acid-proof bacterium or streptothrix from the real tubercle bacilli may be made. Ophüls concludes that pulmonary gangrene is very probably always due to a mixed infection with pyogenic cocci and other bacteria of a more saprophytic nature. Quite frequently the latter belong to the class of actinomyces, and these may be more or less acid-proof. Without claiming anything for the specificity of any particular acid-proof bacterium for pulmonary gangrene, it might be well to bear in mind this conclusion of Ophüls and the observations of Fraenkel, Pappenheim, Mayer and Rabinowitsch.

THE QUESTION OF NEPHROPEXY.

From the extreme radicalism of Edebohls, who strips the kidney of its capsule before suturing it into place, and that of Carwardine, who paints the organ with liquid carbolic acid in order to obtain firmer adhesion, we encounter various devices and operations almost as numerous as the authors, until we reach extreme conservatism, which is aptly illustrated by a recent article in the *Therapeutic Gazette* (July 28, 1902) by Gallant. He takes the position that from ninety to ninety-five per cent. of women who suffer from movable kidney can be relieved without operation, and advises for treatment rest and quiet, sleep, diet, massage and exercise, visceral support, and operation, having devised a very ingenious corset to give support. Quoting Lichty, he says: "The surgeon usually speaks of the number of cases successfully treated by (attempted) permanent fixation of the kidney, but very little is said by him of the disappearance of the numerous symptoms and the ability of the patient to do her usual work after operation."

Here an injustice is evidently done the surgeon, for he is about as anxious for the relief of symptoms as he is about the fixation of the kidney; and also cognizance of those cases of nephroptosis with local symptoms only and without the great neurasthenia which Gallant depicts is left out of the question. He speaks of subjecting the neurasthenic to various operations; such as curettage of the uterus, abdominal section for tubal disease, repair of lacerated cervix, etc., "in fact, any procedure which will remedy or remove any source of suffering or irritation." He then has the nose and throat examined, any operation needed

done, and goes so far even as to advise, when called for, gastropexy, pyloroplasty, etc., seemingly advising such operations as are often done upon neurasthenics, with the exception of nephropexy. It is a well-known fact that neurasthenics may appear to need any or all of these operations. It seems strange to subject the patient to these and yet hesitate at nephropexy, which cannot compare in danger to some of the above, when Gallant clearly points out that the sagging downward of the kidney does cause manifold symptoms. The author evidently unintentionally makes a strong plea for nephropexy, when he advises other operations to relieve a source of irritation. It appears that the rational treatment consists in studying the individual cases and submitting to proper nephropexy those in which the local symptoms are manifest, and not expecting thereby to necessarily relieve the numerous other symptoms, of which neurasthenics complain, but at least to remove or ameliorate one source of irritation.

DIAGNOSING TYPHOID BY AID OF CAMERA.

The photographic camera, it is said, will occasionally enable us to diagnose typhoid fever a few days earlier than would otherwise be possible. The characteristic roseola is always preceded by an eruption on the abdomen quite invisible to our eyes, but capable of being photographed. According to H. Gibbes, the following technique gives the best results: The patient's abdomen is exposed and a piece of printed paper laid on it. The camera is focussed on the patient; the paper is then removed and while an assistant throws a bright light on the abdomen, the picture is taken. Only the most rapid orthochromatic plates give good results. At least six pictures should be taken of each case, for the chances are that only one or two of the plates will have a picture sharp enough for use. As a developer it is best to use a very dilute solution of hydroquinone or paramidol, so as to get as "contrasty" a plate as possible.

Positive results, it is said, may be obtained by this method before the appearance of either the Widal reaction of the blood or the diazo reaction of the urine.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

Investigations Concerning the Bacteria in Human Feces.—STRASBURGER (*Zeitschrift fuer Klinische Medicin*, vol. xlvi, pts. 5 and 6).—After thorough investigation of the subject the author concludes that:

1. Up to the present time the methods for determining the quantity of bacteria in the feces are very inaccurate, and cannot give even approximately correct results.

2. It is possible, however, by the author's method to separate mechanically the bacteria from the feces, and to weigh them. Exact results can be obtained by this method.

3. Normally, about one-third of the dry substance of the feces is made up of bacteria.

4. The amount of bacteria excreted daily by adults: (a) normally, an average of 8 g.; (b) in intestinal dyspepsia (without diarrhea), about 14 g., sometimes as much as 20 g.; (c) chronic constipation, 5.5 g.

5. In chronic constipation the solid substance of the feces is reduced, because the food is more thoroughly absorbed in these individuals. The decrease of bacterial flora in these cases is probably due to the decrease of the culture media in the colon. As a result of the diminished development of bacteria, there is also a diminution of the substances which stimulate peristalsis.

6. In a case of biliary obstruction the amount of bacteria was reduced to 3.2 g. per day. After removal of the obstruction the quantity again arose to the normal. This is of interest in connection with the so-called "antiseptic action" of the bile.

7. In infants there is normally about the same percentage of bacteria as in adults. In dyspeptic babes it can increase to double the quantity—i. e., to two-thirds of the entire solids.

8. If one reckons the number of bacteria excreted daily, using the bacterium coli communis as the average size, he finds one hundred and twenty-eight billion bacteria in the normal feces.

9. At least one-half of the entire amount of N in the feces is due to bacteria, a fact which seems to have escaped former observers.

Concerning Syphilis of the Liver.—EINHORN (*Archiv fuer Verdauungskrankheiten*, vol. viii, part 3).—Although syphilis of the liver is not an infrequent occurrence, comparatively little has been written on the clinical aspects of the subject. The author gives a short resume of the history of this affection and some of the literature dealing with it.

He divides syphilis of the liver clinically into three groups:

1. Gummata of the liver.
2. Syphilitic cirrhosis of the liver.
3. Syphilitic affections of the liver (including groups one and two), with icterus.

The latter can be either acute or chronic.

Of the first class the author reports four cases. In all these there was marked enlargement of the liver characterized by nodules of various sizes. Anti-luetic treatment brought about complete cures, anatomical and clinical.

Of the third class ten cases are presented with the same satisfactory results following anti-syphilitic treatment.

The symptoms of syphilis of the liver are pain in the right hypochondrium, sometimes constant, sometimes paroxysmal. If paroxysmal, the attacks may resemble gall-stone colics. In nearly every case there are digestive disturbances, such as loss of appetite, eructation, constipation, etc. There is loss of weight, though not usually so rapid or so marked as in cases of malignant growths of this organ. Icterus may be acute or chronic, and in the latter cases are nearly always due to pressure on the common duct. The liver itself is always more or less enlarged; if due to gummata the surface is very uneven; if due to cirrhosis the organ is simply enlarged. Enlargement of the spleen is not constant. Ascites occurs in the later stages.

It is not possible to differentiate between malignant tumors of the liver and gummata by the consistence. If the disease has continued for a year or two without great loss of weight, and if there is any history of lues, the resistance may be attributed to this cause.

An increase of the eosinophyle cell speaks for syphilis. Care must be taken not to confound the diffuse syphilitic enlargement of the liver with the hypertrophic cirrhosis due to alcoholism. In the former, there is usually a history of syphilis and luetic manifestations on the body. The anti-luetic treatment acts promptly.

The chief point in treatment is the free use of the iodides, gradually increased from two to five grammes, for a period of several months.

Leukocytosis in Lead Workers.—L. NAPOLEON, Boston (*Phila. Med. Jour.*, September 27, 1902).—The writer studied the changes of the blood in lead workers in twenty-four cases. Of these two were painters, one a plumber, another a lapidary who used an emery pencil, which he repeatedly placed to his lips while at work, and the remainder had been employed for a variable time in either "paint" or "lead works." The results of these investigations are as follows:

"A moderate reduction in the number of erythrocytes to 3,500,000 is the rule, yet in severe cases they may fall below this number. In a few instances, however, the red cells are found to be above the normal, as was observed in four cases of my series which showed 4,760,000, 5,090,000, 4,940,000, 5,500,000 cells per cmm. respectively.

"The hemoglobin was found to fluctuate between 32 and 85 per cent. No constant ratio was found to exist between the number of red cells and the percentage of hemoglobin, as is shown in the four cases of polycythemia above cited, in which the respective amounts of hemoglobin were 46, 32, 79 and 85 per cent. In the latter case the exposure to lead had been of short duration and the symptoms mild; the line about the teeth, however, was fairly distinct.

"Smears made from the different cases, and fixed by heat, were alike in displaying a rather high grade of poikilocytosis, the erythrocytes staining feebly in many instances; many appearing as mere shadows, while in others certain cells stained irregularly. Overstained cells were uncommon, macrocytes and microcytes numerous and nucleated red cells an occasional finding; of these, normoblasts were the commoner."

The Classification of Chronic Nephritis.—JAMES B. HERRICK (*Jour. of Am. Med. Ass.*, October 4, 1902).—No serious attempt has ever been made to classify cases of chronic nephritis from the standpoint of etiology. Morbid anatomists and pathologists are far from unanimous in their descriptions of the various types or groups of this disease. And physicians are not always able to make a differentiation that is satisfactory from the clinical point of view or that holds good in the light of post-mortem revelations. Yet it is important that we have some working classification, even though it be somewhat faulty and largely artificial.

The classification that seems the best is practically that of Senator. It is one that appeals to the clinician as well as to the morbid anatomist. The term "parenchymatous" can be used in place of "diffuse without induration," because, though not literally expressive of the true condition, which is more or less diffuse, it recognizes what is true, that in this form the parenchymal changes predominate; they are quantitatively greater than in the second variety, where the process, while diffuse, produces chiefly interstitial or stromal changes with resulting induration. The classification would be as follows:

1. Chronic parenchymatous nephritis. (Chronic diffuse nephritis without induration.)
2. Chronic interstitial nephritis. (Chronic diffuse nephritis with induration.)
 - (a) Primary chronic interstitial nephritis.
 - (b) Secondary chronic interstitial nephritis.
 - (c) Arterio-sclerotic kidney. (Arterio-sclerotic interstitial nephritis.)
3. Mixed type—i. e., a combination of 1 and 2.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Diversion of the Portal Blood by Means of a Direct Communication Between the Vena Cava and the Vena Porta.—TANSINI (*Centralblatt fuer Chirurgie*, September 6, 1902).—The author tried the above several times upon the cadaver with success, and then communicated the idea to a student, who performed the operation upon ten dogs with a satisfactory result in seven instances. After severing the portal vein at the hilus of the liver, he sutured the free end into a slit in the side of the vena cava, whereupon the animals which survived the operation did as well as others of their kind until they were killed, more than two months later, and a satisfactory anastomosis found.

Congenital Dislocation of the Kidney.—DELORE (*Revue de Chirurgie*, No. 9, 1902).—Such cases are of special interest to the surgeon and the obstetrician, but how is one to distinguish the congenital from the acquired form? The author gives four points of difference. No. 1.—The congenital is fixed in its abnormal position. No. 2.—The shape of the kidney is altered. No. 3.—Its arteries are multiple and have unusual origins. No. 4.—The ureter is very short. In twenty-one cases which the author has collected the left was affected fifteen times, whereas the right was affected but six times. The displacement is downward, and it may be abdominal or pelvic, or a mixture of the two. It may be on its own side of the body, it may be on the median line, or it may be dislocated clear to the opposite side of the body. The author gives here the history of a woman forty years of age who was operated upon. The kidney was fixed in position with incomplete definite result. As far as symptoms are concerned, there may be none at all or they may be severe as result of pressure on other organs. The second case was seen by the author at an autopsy. As far as treatment is concerned, it may be said that the excision of the kidney is the only procedure which is sure to cure the case which survives the operation. The laparotomy is the operation of choice, and it should be done from in front.

On the Avoidance of Shock in Major Amputations by Cocainization of Large Nerve Trunks Preliminary to Their Division.—CUSHING (*Annals of Surgery*, Sep-

tember, 1902).—The diminution of arterial tension is the characteristic feature of shock, and while slight injuries to an extremity cause an increase in said tension, very severe ones cause a decrease of the same. When a certain amount of shock already exists, there is especial danger in the division of sensory nerve trunks. Cocain injection, by blocking the centripetal influences, effectually keeps down shock from this source. In one case described by the author the pulse jumped from 110 to 150 upon the division of the brachial plexus, no cocain being used. In a second, where the same thing was done after the drug had been introduced, there was absolutely no shock. When peripheral mixed nerves are put on a stretch there is an acceleration of cardiac rhythm, indicative of a reflex pressor effect. However, this may be followed by lowering of pressure if the trauma be too extensive. In extensive traumata to extremities the author advises other and early operation (with cocain as above) to rid the patient of the influences which tend to increase the already existing shock. Arterial tension cannot be judged by the finger on the pulse, but an instrument has been devised for the purpose. There are appended several charts which show the variance of the blood pressure during operations.

When is Acute Nephritis, Excepting the Tuberculous Form, Properly the Subject of Surgical Treatment?—LENNÄNDER (*Mitteilungen aus den Grenzgebieten der Medizin und Chirurgie*, Band x, Hft. 1 und 2).—The most important of the diseases here considered is acute nephritis with miliary abscesses. The danger of urogenic infection of the kidney commences as soon as the outflow is in the least obstructed, and after the abscesses have formed in one kidney it is altogether possible that the same may occur in the healthy organ as a consequence of embolism. Thus it may come about, and probably does in most cases, that the two methods of infection combine to account for the condition. Where the transmission is through blood current, it is by far the greater number of cases which originate from the intestinal tract. However, the greater number of slight infections of this nature never lead to abscess formation, and are easily cured by internal treatment, which consists in great part in the drinking of immense quantities of water. The first and principal symptom of suppurative nephritis is pain in the vicinity of the affected organ. The disease is most frequent in men, because they are more subject to obstruction than are women, and is in consequence almost always bilateral. In the lighter forms of the disease the best preventive treatment is free and careful drainage of the bladder. It must be kept constantly empty. Where supuration has once occurred within the kidney, it is very likely also to affect the tissues immediately surrounding the organ, either by lymphatic transmission or by breaking down of the kidney capsule under influence of the pus. On account of the many blood vessels in the kidney and the tension which this capsule causes, these rapidly lead to general sepsis. The chief danger at first is for the second or healthy kidney. Hence the first indication is to thoroughly drain the diseased organ; but, however, it has been demonstrated that if the kidney is already slightly affected, still the patient may regain perfect health after an operation on the organ which is primarily most diseased. Of course, the exact diagnosis is highly difficult; hence every operation for this infection is primarily in the nature of an exploration. If the diagnosis has been correct, one finds edema of the fatty capsule; the kidney very dark in color and hard; then the little abscesses shining through the capsule or else felt as circumscribed nodes covered with fibrin; then the organ is split either in the ordinary post-mortem plane or else through the most diseased portion, after which it is good practice to excise everything which seems bound to undergo softening. A rubber drain is now placed in the pelvis of the organ and the incision stuffed with gauze, the same material being packed around the kidney. By this means the tension is relieved, the circulation resumes its normal

course and free exit of pus and urine is allowed. It is, further, good practice to completely remove the fibrous capsule of the organ. If it is found that the greater part of the kidney has undergone pus formation, it is well to completely remove the organ. If then there be obstruction of the bladder by clot formation, it is well to make suprapubic section at once. The principal symptoms for which operation is necessary are local pain and sensitiveness to pressure, these of course being reinforced by the usual chemical and microscopical examination. Such an operation as described is especially to be undertaken where a sudden oliguria or anuria occurs in a patient whose general condition is good and who manifests symptoms just detailed above.

The author gives histories of several cases upon which he has operated with results which must be characterized as brilliant.

Actinomycosis of the Appendix and of the Abdominal Wall.—THEVENOT (*Gazette des Hopitaux*, No. 90, 1902).—Thevenot considers that the disease as above localized always has its starting point in the intestines; and further, that it may simulate an ordinary appendicitis so perfectly as scarcely to be distinguished from it. The treatment in all cases, no matter where the seat of the disease, consists of radical surgical measures if possible, and at the same time of the administration of iodide of potassium in very large doses. The patient under consideration was a woman forty-five years of age, who had passed through several attacks of what was described as gastritis. In October, 1901, she was suddenly taken down with symptoms of an infectious disease within the abdomen, but without any noticeable starting point. Later it was made out that the appendix was highly diseased, and after two more attacks within the next four months she was operated upon. Before this time, however, a tumor had appeared in the abdominal wall. At the operation the disease of both the appendix and abdominal wall was demonstrated actinomycosis.

Several months later the patient was in perfect health. There can be no doubt that the disease was caused in her case by the ingestion of the specific germs, and the author explains the consequent infection of the tissues outside the appendix by the diapedesis of white blood cells loaded with germs.

Carcinoma Limited to the Vermiform Appendix.—HARTE and WILLSON (*Medical News*, Vol. 8, No. 5).—Only eight or ten authenticated cases of this kind are on record. The authors have seen one such case, and they have another from Philadelphia which they are permitted to report for the first time. Very fine illustrations which accompany the article serve to make clear the pathological facts at fault. The most likely cause of the trouble is agreed by our authors to be a catarrh which lowers the tissue resistance of the part. They do not believe that this disease can be diagnosed early in its history, and consequently its treatment must usually be undertaken under the impression that an ordinary appendicitis is being dealt with.

Several Complications and Difficulties in the Removal of the Vermiform Appendix in the Iterim.—ROUX (*Archiv fuer Klinische Chirurgie*, Band 67, Heft 3).—The histories of six hundred and seventy cases are reviewed, and of these one hundred and thirty were operated upon after primary emptying of the abscess. The most of these, because they were afraid of another attack, or else because they feared a hernia from the drain. Adhesions are not nearly so productive of harm as a many think. In only five of these was there phlebitis, and these on the left side. The difficulty attending the operation consists mainly in knowing the situation of the appendix, and further in the presence of perforations, and lastly in the presence of an incompletely resorbed exudate. This last factor can be avoided by waiting from four to six weeks after the attack, or until natural resorption is

complete. However, in one case it was necessary to wait seven months in order to gain this point. Suppose the abdomen or pelvis to be so filled with adhesions that it is impossible to do anything, these same will in most instances completely disappear after the affected intestines are nicely placed at rest, this being done by means of lateral anastomosis between the healthy parts. In almost seven hundred cases the author has but two deaths to report, one as the result of ileus and the other from embolism on the day the patient left the hospital.

A Case in Which a Spoon, Twenty-two cm. in Length, was Removed from the Stomach After Remaining There More Than Six Years.—CERNE (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, Tome xxviii, No. 29).—Although this patient, a man fifty-eight years old, had carried his spoon for six years, still he had never suffered pain until three months previous to the time of the operation. Since this time the stomach had commenced to hurt him about half an hour after each meal, and had continued to cause distress for an hour or two. A radiograph showed the position of the spoon, so that it was a comparatively easy matter to cut down upon it and remove it, without causing the patient any bad symptoms. The spoon was thickly covered with mucus and blackened, the surface being at the same time extensively corroded. An analysis showed the spoon to be a mixed metal, from which the silver plating had entirely disappeared.

Pathogenesis and Surgical Treatment of Exophthalmic Goitre.—A. E. HALSTEAD (*Iowa Medical Journal*, Vol. 8, No. 9).—The author says the two chief indications for operation are symptoms which arise from pressure upon the trachea and the destructive manifestations upon the eye which are the consequence of its decided bulging. Later the symptom is most quickly effected by double excision of the cervical sympathetic. The methods of operation which have been employed are ligation of the thyroid artery, exothyropexy, enucleation of the nodular growths, and unilateral excision of the gland. However, none of these are of much value except the last named. Pressure upon the trachea results after a time in the degeneration of its rings, and as a consequence it softens and collapses, so that sudden death from suffocation may occur. The author seems to think that excision of the cervical sympathetic is as efficacious in the treatment of this disease as is partial excision.

Intestinal Resections Done Between the Years 1896 and 1901.—TIEMER (*St. Petersburger Medicinische Wochenschrift*, August 24, 1902).—There are ninety-three cases in those referred to, operated upon by the author himself. The operations were done for all the various causes which commonly necessitate such procedure. Forty-three of these cases were occasioned by strangulated hernia. Twenty-seven of the patients died as result of the operation. The author refers to the fact that the patient's age had in all instances a great deal to do with the outcome. This is illustrated by the fact that no one under thirty-six years of age died as result of the operation. In one case as high as three and one-half meters of the intestine was removed without causing the patient's death. The condition of the intestine at the time of operation has, as a matter of course, a great deal to do with the outcome. However, the author considers the prognosis in these cases relatively good, if the operation has not been postponed until the patient is greatly weakened.

Hernial Tuberculosis.—SACQUEPEE and MELLIES (*Archives Provinciales de Chirurgie*, Tome xi, No. 7).—Two of these rare cases are detailed. The first was a young soldier with an inguinal hernia, which had occurred as the result of heavy lifting, the same being irreducible. At the operation the otherwise ordinary appearing sack was seen to be covered on its serous surface with little granules

which, under microscopical examination, proved to be miliary tubercles. The patient recovered nicely from the operation, and a year later was shown to be perfectly well.

The second case was also a soldier. The interior of his hernial sack was found in very much the same condition as was the other. A year and a half after the operation he returned to the hospital with evident signs of tuberculosis. However, he was seen to be in good health some three years after the first operation. The microscope showed in both cases tubercles which represented a tendency to fibrous limitation. The disease is said to be exceedingly rare, and concerning which very little has been written. In twenty-seven of the thirty-two cases which have been described there has been no other trace of the disease found in the individual. It is an affection more common to childhood than any other time of life. It is, of course, part and parcel of general tuberculosis of the peritoneum. The primary seat of the disease is usually in the intestine or plevic organs. Its course is very similar to localized tuberculosis in other parts of the body. There are no typical symptoms. The prognosis is very grave, although it may be modified by surgical treatment if the case is taken in time.

Operative Treatment of Varicose Veins.—BLAKE (*Boston Medical and Surgical Journal*, August 25, 1902).—Trendelenburg's test demonstrates the fact that varicose veins are curable by surgery in certain cases, and, further, that the deep veins are patent. (This test consists in elevating the leg until it is free from venous blood, and then pressing the saphenous vessel, then moving the member and taking off the thumb, when a wave of blood will be seen to rush into the varicose areas.) It is claimed by some that disease of the superficial veins is always accompanied by similar indications in the deep veins and arteries, consequently it is extremely important that something be known about the condition of these deep structures before an operation is performed intended to completely obstruct the artificial vein. Twenty-five cases which Blake has followed resulted in seven cures, though it must be stated that he managed to communicate with but eleven of the patients.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

Bismuthose.—KURT WITTHAUER (*Deutsche Med. Wochenschr.*, 1902, No. 19).—Bismuthose is an albuminous bismuth compound, a white, odorless and tasteless powder. It contains twenty-one per cent. bismuth, swells up in water, dilutes acids and alkalies, but is not dissolved by the gastric juice. The writer has used the drug in a number of cases of gastric ulcer, giving fifteen to twenty grammes daily in a watery emulsion. One advantage of bismuthose over bismuth subnitrate is that the proteid radical of the former represents a nutrient value not to be despised, twenty grammes containing some one hundred calories. Moreover, in cases of hyperacidity the acid-binding power of the albumen is of value, while the formation of bismuth enteroliths, as in the case reported by Fleiner, are out of the question. Bismuth intoxication has not been observed even after the ingestion of very large doses of the drug. After its administration he should first lie down with a pillow under the lumbar spine, so as to elevate the gastric region; then he should lie on his left side, and finally on the right. In this way the bismuthose comes into contact with all portions of the gastric mucosa.

The drug is best given added to rice water or albumen water. An emulsion is produced by adding the hot water slowly to the bismuthose, stirring the while. The possibility of giving it in emulsion is another advantage over the subnitrate. In cases of hyperacidity without ulcers, bismuthose crackers, each containing one gramme, are elegant and effective. In pediatric practice, too, the latter are convenient.

The Dietary Treatment of Chronic Diarrhea.—G. ROSENFELD (*Centralbl. f. d. ges. Therapie*, 1902, No. 7).—The treatment of chronic diarrhea is based on the rule that in this condition the contents of the bowel must be as unirritating as possible. The observance of this rule will lead to the cure of most cases of diarrhea not due to ulcers, stenosis or varices, without the use of drugs. Rosenfeld gives a list of foods that he regards as irritating to the bowel. Besides green vegetables, fruit, fruit juices, beer and all very cold drinks and dishes, the list includes meat, butter and milk. The most harmful of the above foods is milk. What constituent of milk is responsible for this irritating property is not known. Butter, too, is harmful in such cases; raw butter even more so than fried. Of the meats, chicken and pigeon irritate the bowel least. Veal and beef come next. Boiled ham, on the other hand, is usually but not always borne well. The same is true of soft-boiled eggs. A strict diet for a patient suffering from chronic diarrhea consists almost exclusively of vegetable substances—rice, strained oatmeal, barley gruel, sago, cocoa, chocolate, sugar, tea, wheat bread, toast, crackers. The only animal food permitted is clear soup, especially that made of mutton. A sample menu would thus read as follows: Breakfast, tea with sugar or cocoa or chocolate and dry toast; later, clear soup and toast; dinner, barley soup, rice with cinnamon and sugar, chocolate, crackers; during the afternoon, clear soup and toast; supper, oatmeal, rice. In spite of its monotony this diet must be persisted in, and is usually followed by marked improvement. When the stools have been practically normal for two days, stewed chicken or pigeon may be added to the bill of fare; then roast fowl may be given, and finally, after some days, fried. Milk and butter should be added to the dietary cautiously and experimentally, and the return to general diet must be very gradual. The treatment, says Rosenfeld, is difficult but often successful. In uncomplicated cases he has yet to see a failure.

The Medicinal Treatment of Tuberculosis.—ERRICO DE RENZI (*Berl. Klin. Wochenschr.*, 1902, No. 18).—While not denying the importance of the hygienic treatment of tuberculosis, especially as conducted in sanatoria, the writer believes that the medicinal treatment should not be neglected.

The writer has used ichthyol in his clinic in a great variety of cases, many of them advanced. The most noticeable and most constant effect was the diminution of the bronchial catarrh. This diminution showed itself in the lessened amount of sputum and the partial disappearance of the rales. Secondly, an increase of weight and an improvement in the general condition was noted. One advantage of ichthyol is the fact that it can be used for long periods of time without unpleasant secondary effects. It may be used with advantage in cases of actual or threatening hemoptysis, on account of its vaso-constrictor effects. In short, the writer believes that it should be given a trial in all cases not too far advanced.

If we expect to derive benefit from ichthyol it must be given in large doses and for long periods of time. The following formula is convenient:

R Ichthyol	10
Aq. menth. pip	80
Syr. simpl.....	20
Mix.	

During the first week one teaspoonful in a glass of water is given daily, half being drunk in the morning, half in the evening. During the second week two

teaspoonfuls in two glasses of water are given daily, to be taken at four times. The dose is slowly increased in this manner until eight grammes are taken daily. In comparatively robust cases the dose may be increased as above, but daily instead of weekly.

Ichthoform is given in powders of ten to thirty centigrammes (grs. iss to ivss), ten powders being given daily. Its action resembles that of ichthyol, but it seems to have a particularly favorable effect upon the bowel disturbances accompanying tuberculosis. The meteorism, colic and diarrhea are effectively combated and a greater ingestion and assimilation of food made possible.

Sodium salicylate was given as an antipyretic. With few exceptions its use caused a drop in the maximum temperature from 102° or 104° to 99°, and of the average temperature from 100° to 98°. During the use of this drug tuberculin injections produced little or no rise of temperature, and cannot therefore be used as a diagnostic aid. Sodium salicylate must be used steadily for months if we desire to cure the fever, as the temperature promptly returns to its former height if its administration is interrupted. The drug is best administered in powders of one gramme (gr. xv) each, followed by a glass of water. Of such doses, four to six are taken daily; when the fever is unusually high, eight to ten. The former number produce no effect on the blood-pressure, while the latter do cause a fall (10 to 12 mm. Hg.) of the same.

Natural and Artificial Mineral Waters.—W. JAWORSKI (*Klin. Therap. Wochenschr.*, 1902, No. 7).—There is a wide-spread belief, both among the laity and the medical profession, that for some mysterious reason the natural mineral waters have a greater therapeutic value than their artificial imitations. On the basis of an extensive series of observations, the writer denies this *in toto*. The natural mineral waters have an entirely arbitrary constitution. It is far more logical to put up artificial waters containing the salts whose therapeutic effect is desired than slavishly to imitate the constitution of the natural waters.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

Preservative Solutions for Gross Specimens.—R. C. ROSENBERGER (*The Philadelphia Medical Journal*, September 20, 1902).—Rosenberg gives a summary of the different methods of preserving gross specimens. Formaldehyde solutions are commonly used in these solutions. Rubber gloves should be worn in working with such solutions, as the formalin has a very irritating effect upon the exposed skin. One advantage to formalin-containing preservatives is that specimens can afterwards be taken from such organs and used for section-making. It causes marked shrinking and hardening of all objects which are placed in it. A solution used to a great extent in the Jefferson Medical College is made up as follows:

R Alcohol (95 per cent.)	2 parts
Glycerine	1 part
Water.....	1 part

The specimens are first washed for several hours in running water; they are then placed in the solution and kept indefinitely. There is no shrinkage of the specimen, the natural consistency of the organ is very slightly altered and the

color does not bleach as markedly as if pure alcohol were used alone. It is non-irritating to the hands.

Kaiserling's solution meets with more universal favor than any of the other methods. The first solution consists of—

℞ Formaldehyde	200 c. c.
Water	1000 c. c.
Potassium nitrate	15 grammes
Potassium acetate	30 grammes

The specimen is first thoroughly washed in water and then placed in solution No. 1 for from one to four days. Place absorbent cotton at the bottom of the jar so that the specimen is not injured by pressure against the jar and the fluid can get around the specimen equally.

After remaining in the solution for the required time (this is determined by the size of the specimen) it is placed in 80 per cent. alcohol for twenty-four hours and then in 95 per cent. alcohol for twenty-four hours. It is then placed in No. 2 solution, which consists of—

℞ Potassium acetate	200 grammes
Glycerine	400 c. c.
Water	2000 c. c.

The alcoholic solutions used in the Kaiserling method restore the color which is temporarily lost in the formalin-containing first solution. This method preserves the color of specimens. The jars should be kept away from direct sunlight.

Another solution for preserving the consistency of an organ or tissue, and one which also preserves to some extent the color, is that recommended by Galt (*London Lancet*, November 16, 1901):

℞ Sodium chloride	5 oz.
Potassium nitrate	1 oz.
Chloral hydrate	1 oz.
Water	100 ozs.

The specimens are first thoroughly washed in running water and then placed in 95 per cent. alcohol for from six hours to six days. Eight hours' exposure in formalin may also be used instead of alcohol. They are then placed in the above solution and kept indefinitely. Evaporation takes place rapidly from this fluid if the lid of the jar is not fitted tightly. This leads to an accumulation of crystals on the top of the jar, under the lid and around the edges which are, however, not hard to break up. As evaporation takes place more water can be added to replace that lost by evaporation.

A Method of Preserving Gross Specimens for Museum and Class Demonstration.—W. H. WATERS (*The New York Medical Journal*, August 23, 1902).—Waters details a method of preserving gross pathologic specimens for class demonstration. It is an improvement on the Kaiserling method. The method consists in running the specimens through the first Kaiserling solution, then placing them in alcohol for five hours; then saturation for five days longer in No. 2 Kaiserling solution (formula in preceding abstract). They are then imbedded in a fourth solution consisting of—

℞ Kaiserling solution No. 2	15 parts
Gelatin	1 part

This imbedding solution is made in this way: To one part of gelatin fifteen parts of No. 2 solution are added and allowed to stand for a day or two. The resulting mixture is then rendered liquid in a hot water bath, heat being gradually applied. To this is added the white of an egg and the heat is increased

until coagulation is completed. The solution is then carefully filtered and allowed to cool. Its preparation is somewhat similar to that of preparing nutrient gelatin for culture media.

Specimens prepared in the usual way for Kaiserling solutions are cut into sections of about one cubic millimeter thickness in such a manner that one of the flat surfaces shows the features desired. Into a Petri dish is poured a thin layer of the gelatin solution and allowed to cool down to 30° or 35° C. and in this is placed the section, face downward. The gelatin soon solidifies and thus holds firmly and evenly against the glass the particular surface desired to be seen. The entire Petri dish is now filled with No. 4 solution till a convexity is formed above the edges. A square, ground glass plate is removed from a basin of water and placed, quite still wet and with the rough surface down over the Petri dish. If this last procedure is performed carefully, touching first one edge of the dish with the plate, then dropping it slowly, a wave of gelatin will be formed which will force out any air bubbles that may be present. The plate is placed in position and the entire preparation left to harden, which takes place in two hours. The superfluous gelatin is removed with a coarse brush immersed in water. The glass is dried, a layer of Canada balsam is applied to seal the point of union between the plate and the Petri dish, and the name of the specimen written on the glass plate with ink.

For some reasons as yet unknown the colors of these preparations seem to be more permanent than of those remaining in the ordinary Kaiserling No. 2. These mounts are permanent, compact, neat, readily adaptable for class demonstration, and successfully preserve their colors.

The Bacterial Contamination of City Milk. Is it Harmful? Should it be Controlled by Health Authorities?—WILLIAM HALLECK PARK (*Yale Medical Journal*, September, 1902).—From an examination of nearly 1000 specimens of milk in New York, gathered by the health department inspectors from the cars, from wagons and stores, and many specimens taken from children's asylums, it was found that the number varied from 1,000,000 to 100,000,000 per cubic centimeter.

Harmfulness of this milk: The children under one year, on heated milk received from decent farms, running before heating from 1,000,000, to 5,000,000 bacteria per c. c. did not suffer any serious harm from the bacterial products in the milk. During the summer these children had, off and on, intestinal disorders, but not much more than those in the same section of the city receiving milk from the very best possible dairies around New York. The children on Pasteurized milk showed some very interesting results: there were very few bacteria in this milk when first received—anywhere from 10,000 to 20,000. On the second day they had increased to 10,000,000. In some cases when the second day milk was given there was immediate vomiting followed by diarrhea. As the freshly Pasteurized did not produce this vomiting, there was no question but that the bacterial changes in the milk rendered it unwholesome.

Fresh milk running rather high in bacteria, when sterilized, did but little harm. Children fed on the cheap, four-cent milk from the groceries did badly. Intestinal disturbances, causing death in some cases, followed the use of this milk. Yet this milk was not extraordinarily high in bacteria. The bad effects were possibly due to the milk products resulting from taking milk from cows in poor health, etc.

In the asylums, where the children were from three to thirteen years of age, the results with milk very high in bacteria were not bad.

Altogether, it seems that fairly numerous bacteria in milk obtained from clean, healthy cows, living on good farms, do not cause harm in older children, and the products do not cause much harm in younger children when subjected to heat. When milk badly contaminated and improperly kept, so that the bacteria multiply rapidly, is fed to babies they do badly, and it seems that much

of the mortality is due to poisonous conditions of the milk developed by the bacteria.

Angina Due to the Bacillus Megaterium.—H. VINCENT (*La Presse Medicale*, July 30, 1902).—Vincent reports a mild case of angina in a young soldier of twenty-two years. There was a slight fever at first. The pharynx was congested and the right tonsil covered with a slightly adherent yellow exudate. Cultures and smears showed the bacillus megaterium present. This organism is commonly found in fecal matter, in the air and in the soil. It is usually regarded as non-pathogenic, but it was evidently pathogenic in this case. Vincent was able to produce a fever and dyspnea in a guinea-pig by subcutaneous inoculation of the animal with a broth culture of this organism. All attempts to produce a membranous angina in the throats of guinea-pigs were unsuccessful.

Thiry, of the University of Nancy, found a similar yellow membrane on the tonsil of a case at autopsy, where cultures showed the bacillus megaterium. It is well known that the bacillus megaterium as found in the air can be endowed with pathogenic powers for guinea-pigs by frequent passage through their bodies.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Pregnancy and Delivery in Cases of Advanced Tabes Dorsalis.—MIRABEAU (*Centralbl. fuer Gyn.*, No. 6, 1902).—The author reports the following case: Patient is at present thirty-four years old. When seventeen she acquired a syphilitic infection. Nine years later she observed weakness, and at times pain in both limbs and symptoms of ataxia. When thirty-one years old she had a miscarriage. Mirabeau found at this time all the symptoms of an advanced tabes: complete paralysis of both lower extremities, loss of knee-jerk, complete ataxia, reduced sensibility, contracted pupils, rigid not responding to light, severe disturbance in the functions of bladder and rectum. Complete absence of sexual feeling since three years. Patient underwent another antisyphilitic treatment, followed by slight improvement, so that she was enabled to walk a few steps supported by a cane. Patient called on the author nine months later, being pregnant three months. After a third treatment with inunctions the pregnancy took a normal course. Labor began at the normal end of pregnancy. Since the uterine contractions were not felt by the patient, the escape of the amniotic fluid was the first sign that labor had begun. At this time the uterine os was found almost fully dilated. Delivery was completed within the next sixty-five minutes, during which period seven uterine contractions were noticed. Patient was fully unaware of these proceedings and did not realize what had occurred until she heard the baby, a well-developed girl, cry lustily. The lying-in period passed without incident.

This case proves that the motorial function of the uterus is to a considerable degree independent of the spinal cord, and apparently regulated by peripheric centers, situated in the uterus itself (in accord with experiments made by Goltz, in pregnant bitches.) It is a well known fact that too severe pains restrain parturients from using their abdominal muscles, therefore, in such cases morphine must be considered a valuable ecboic. In the author's opinion in this case, as well as in two others which he cites from literature, the anesthesia due to tabes had a similar effect of agitating the help of abdominal pressure and hastening the expulsion of the fetus. What an irony of fate that a dreadful, incurable dis-

ease is capable of ameliorating the disagreeableness of labor in an ideal manner, by relieving the pain and shortening the duration of expulsion!

The author gives a short survey of the other few cases of parturition in *tabes dorsalis* known in literature.

Confinement in a Case of Advanced *Tabes Dorsalis*.—R. COHN (*Centralbl. fuer Gyn.*, No. 16, 1902).—Patient was thirty-nine years old, and exhibited the typical symptoms of *tabes*. Anesthesia was complete. She was pregnant for the first time. In spite of her advanced age the confinement took an ideal course. Labor pains were not felt, and not until the fetal head was visible in the vulva did the patient realize that she was in labor. Puerperium uneventful. Patient succumbed about one year later to her disease.

Hemorrhage Into the Spinal Cord During Pregnancy.—ALEX. BRUCE (*Scottish Med. and Surg. Journal*; rev. *Med. Record*, September 6, 1902).—He gives the following principal symptoms in the case: Onset at the fifth month of pregnancy during an act of vomiting; sudden pain in the back and trunk; paralysis of the lower limbs and trunk muscles; paralytic retention of urine; constipation and great dyspnea; sensation absolutely lost below xiphosternum; paralysis flaccid during rest of life; loss of left, persistence of right knee-jerk; disappearance of deep reflexes after six days and slight reappearance of them ten days later; rapid formation of bed-sores; painless and unconscious birth of twins at seventh month; death from bronchitis and exhaustion. At autopsy hemorrhages into the spinal cord were found, due to small tumors in the cord.

Reports of parturition in cases of anesthesia and paraplegia are extremely rare. Routh has collected six, and concludes that if the lesion is in the lumbar region the uterus may begin the labor automatically, but cannot complete it; if above the lumbar region the act can be completed, showing that the reflex mechanism in the lumbo-sacral region is sufficient of itself without any voluntary assistance. The case reported supports the latter conclusion, and also shows that the sensory path from the uterus enters the cord in the lumbo-sacral (or possibly lower dorsal) region.

Tuberculosis of the Larynx and Pregnancy.—A. KUTTNER (*Deutsche Aerztezeitung*, 1901; rev. *Centralbl. fuer Gyn.*, August 9, 1902).—Based upon an observation of fifteen cases the writer advocates the following rules for cases of pregnancy, complicated by tuberculosis of the larynx: In patients who are in a hopeless condition the usual local treatment is resorted to, eventually tracheotomy performed. If the general condition is still good and the local process limited (small erosion or ulcer) the case is carefully observed. As soon as the process offers signs of propagation in form of infiltration, tracheotomy should be performed at once. If this operation is not followed within a few days by decided improvement of the local process, artificial abortion is indicated. The sooner this is done the better are the chances for the mother. In every case of far-advanced tuberculosis of the larynx, it is advisable to perform tracheotomy before labor begins, or at least to be prepared for this operation.

Myxedema, Parturition and Eclampsia.—A. HERRGOTT, Paris (*Annales de Gynecologie*, July, 1902).—The writer reports the following case: A girl of eighteen, who showed all the symptoms of myxedema, apparently due to congenital absence of the thyroid gland, developed during parturition eclampsia of a severe type. Twelve attacks occurred during, eight after the expulsion of the fetus. Patient recovered promptly of the eclampsia. Only traces of albumen could be found in the urine, and this led the author to the conclusion that in this special case the convulsions were not due, as usually, to insufficient function of

the kidneys or liver, but to the lack of the thyroid. He suggests the possibility of a special type of eclampsia caused by an intoxication which, in its turn, is brought about by the lack of thyroid secretion. Herrgott's theory seems well founded and is based upon the investigations and observations of Reverdin, Kocher, Verstraeten, Vanderlinden and others, which proved the power of the thyroid secretion to destroy certain toxins, and demonstrated a relationship between pregnancy and the function of the thyroid gland.

A Remarkable Case of Delivery of Twins.—C. DONS (*Ugeskrift fuer Laeger*, No. 25, 1902; rev. *Muenchner Med. Wochenschrift*, August 26, 1902).—Patient, III para, was March 5, 1900, delivered of a living child; weight, 2000 grams; duration of labor, six and one-half hours. Mother was of the opinion that the confinement took place four weeks before full term. A hemorrhage following expulsion of the first fetus was checked by removal of the placenta. The expulsion of the second fetus took place twenty-three days later, on the 29th of March. Labor lasted four and one-half hours; weight of the child was 3000 grams. Lying-in period passed normally. Both children were girls, who afterwards developed in a very satisfactory way. Secretion of milk did not begin until after delivery of the second child, so that the first had to be fed up to this time with the bottle.

Adrenalin in Metrorrhagia of the Menopause.—DEBROUD (*La Tribune Medic.*, July 23, 1902; rev. *Med. Record*, August 30, 1902).—One of his patients was a woman fifty years of age. Ergotine did not stop the hemorrhage from which she suffered, and the writer gave her ten drops of a 1 to 1000 solution of adrenalin. By evening the flow had diminished one-half. On the following day fifteen drops were administered. The improvement continued. On the next day twenty drops were given, and that day hemorrhage ceased. The dose was then decreased in inversed gradation. Since that time several catamenial periods have occurred regularly.

From all his experience the writer believes that adrenalin is a hemostatic of the first order in the severe hemorrhagias of menopause. Unless the case is urgent, he advises to begin with a small dose.

Aspirin in Dysmenorrhea.—LEHMANN (*Deutsche. Med. Wochenschr.*, August 7, 1902).—The author reports satisfactory results with aspirin in cases of nervous, non-mechanical dysmenorrhea. He gives doses of seven to fifteen grains, repeated at intervals of one-half to one hour, according to the condition, until from forty to fifty grains are given.

Illumination and Inspection of the Abdominal Cavity (Ventreoscopy) in Vaginal Celiotomy.—D. VON OTT, St. Petersburg (*Centralbl. fuer Gyn.*, August 2, 1902).—One of the main arguments of the adversaries of the vaginal route is the impossibility of a careful ocular inspection of the abdominal organs, not just within the field of operation. It seems that this objection is overcome by an ingenious invention of the well-known Russian gynecologist Ott. The simple and satisfactory procedure exploited by him in a number of cases consists in the following: The patient is in an extreme Trendelenburg position. In this position the intestines sink back to the diaphragm and the pelvic wall, and those of the pelvic contents which are fixed, or but little movable, as rectum, vermiformis, bladder, etc., are presented for direct inspection. The only condition to be fulfilled being illumination of the field. Such is obtained either by means of a concave reflector, as used by laryngologists, or with special long retractors, constructed by Ott, which carry at their end a little electrical lamp. This inspection can be made either through the opened anterior or posterior fornix or with the greatest

satisfaction through the wider avenue after vaginal hysterectomy. One of the illustrations of the essay represents the view attained after extirpation of the uterus. All the ligatures can be seen, the appendages of one side which have been left, the processus vermiformis, rectum and bladder. For details as regards the retractors and the technique of the method, we have to refer the reader to the original article, which is well illustrated.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Education and Development of Neurotic Children.—G. M. HAMMOND (*New York Medical Journal*, August 30, 1902) considers that the number of neurotic children is steadily increasing. The chief etiological factors are heredity, and alcoholism and syphilis in the parents. In infancy the neurotic disposition may show itself by a tendency to convulsion from intestinal disturbances, etc. Neurasthenia and hysteria, on the other hand, do not, as a rule, show themselves before the fifth or sixth year. Very often the only neurotic sign is precocious mental development, without corresponding physical power. These brilliant children often fail to fulfil the promises of their childhood in later life. With the advent of puberty, nervous diseases are common, such as neurasthenia, hysteria, epilepsy, migraine, masturbation and abnormal sexual conditions.

The remedy for this condition should begin early in life, as soon as the neurotic element is discovered. There should be special education for such children. Careful watch is necessary to see that the child is not overtaxed; mental fatigue must be absolutely avoided. No attempt should be made to force such children, for their brilliancy "is the evidence of disease and should be so regarded." The physical education is a matter of paramount importance. Every effort should be made to have the child grow up a healthy and vigorous man; the lack of mental training can easily be made up subsequently.

The diet should be mainly nitrogenous, but care must be taken to see that the child is not overfed.

The moral treatment is also of importance, and, though punitive measures should not be harsh, correction should be used when necessary. These children need restraint, must be taught to control their emotions, and, above all, to learn obedience.

The various bodily functions must be regulated, hygiene of the body attended to.

The author believes that by such measures children of neurotic tendencies may develop into perfectly healthy men and women.

Infantile Eczema—Its Etiological Relation to the Gastro-Intestinal Tract.—REY (*Jahrbuch fuer Kinderheilk*, September, 1902) concludes that

(1) Eczema is of very frequent occurrence in infancy, and very resistant to treatment.

(2) The view that its occurrence is always due to external (local) irritation is untenable.

(3) The great proportion of cases of infantile eczema show an intimate relation with disease of the gastro-intestinal tract, as is evidenced by the good results of internal medication and the frequent failure of purely local treatment.

(4) This form of eczema, which is peculiar to infancy, is to be differentiated from the ectogenous, parasitic and artificial eczemas of later childhood.

(5) The treatment of this form of eczema is, therefore, to consist in regulation of diet and the giving of intestinal antiseptics. Secondary infection and "eczematization" may require local treatment in addition. Even here, however, the internal treatment is the more important.

The Therapeutic Value of the Internal Use of Carbolic Acid.—DESSAU (*Pediatrics*, September 15, 1902) reports that he has used carbolic acid internally in four thousand cases, the majority of them infants and children. He finds the drug of especial value in the treatment of catarrhal affections of the respiratory tract with the symptom complex of influenza. His method of administration is to use a solution of the strength of 1, 2, 3 or 5 per cent., put up with glycerine and cinnamon water. The chemically pure drug should be used.

An infant under a year of age receives a teaspoonful of the 1 per cent. solution every two hours; a child of five years gets the same dose of a 5 per cent. solution.

No bad effects on the kidneys were observed in any case. The only idiosyncrasy against the use of the drug was that of vomiting.

Treatment of Tuberculous Peritonitis in Children.—ROTCH (*Archives of Pediatrics*, September, 1902) summarizes the treatment of tuberculous peritonitis from a study of sixty-nine cases treated at the Boston Children's Hospital.

The most common age of incidence in childhood is one and a half to four years. In the first year of life it is very rare and almost universally fatal, as at this time it is almost invariably part of a general tuberculosis. Pathologically, the cases may be divided into primary and secondary cases. The secondary cases are most often those infected from lungs, intestines and mesenteric lymph nodes. Where the lungs or the intestines are the primary cause, the prognosis is that of general tuberculosis, so that laparotomy is seldom of avail. Where the tuberculosis is primary in the mesenteric lymph nodes, laparotomy is often of value and should be tried. And where the tuberculosis is *primary in the peritoneum*, laparotomy is directly indicated and often results in complete cure.

In the primary cases the prognosis is better where the tuberculosis is represented by miliary tubercles of the peritoneum with ascites than in the cases with thick adhesions, without much fluid.

Taking into consideration the fact that in competent hands exploratory laparotomy is a safe procedure in comparison with non-operative treatment, and the further fact that spontaneous recovery without laparotomy occurs only in a small minority of the cases, the author believes that the laparotomy should be done whenever it is possible.

Cyto-Diagnosis in Meningitis and Pseudo-Meningitis.—The *Rev. Mens. des Mal. de l'Enf.* for September, 1902, contains a summary of the present status of cyto-diagnosis in the various forms of meningitis, based upon the Paris thesis of Demange.

Under normal conditions the cerebro-spinal fluid *does not* contain leucocytes or red-blood cells. It has been found, however, that the fluid obtained by lumbar puncture in cases of meningitis *does* contain cellular elements; and, further, that the varieties of cells found differ in the various forms of meningitis.

Briefly summarized, it may be stated that in tubercular meningitis the cells found are nearly always lymphocytes.

In cerebro-spinal meningitis the cells are nearly always polymorphonuclears. This rule is, however, not absolute.

For occasionally in a meningitis no cells are found, and, per contra, in a few cases cells have been found where there was no meningitis.

In addition, there is a distinct prognostic value to these examinations. Thus, in cases of cerebro-spinal meningitis that go on to recovery, it is found that the number of leucocytes gradually diminishes, to disappear just before recovery is complete.

The value of such examination becomes apparent in cases where careful bacteriological examinations, with culture and eventual animal inoculation, cannot be made, in that the simple examination of the centrifugalized sediment of the fluid may aid materially in the establishment of a definite diagnosis.

With reference to the cases of pseudo-meningitis occurring in the course of typhoid fever, gastro-intestinal disturbances and the like in children, it is at present impossible to formulate any definite law. In the fluid obtained by puncture in cases of typhoid fever, lymphocytes are sometimes found, which, under the conditions, would certainly not indicate the existence of a tubercular meningitis.

But even in these cases the examination may have a great negative value, for if the cerebro-spinal fluid contain no cellular elements, it would clearly indicate that we have to do with simple meningeal irritation, and not with a true meningitis.

Empyema in Infants and Children.—KOPLIK (*Medical News*, September 13, 1902) says that it is not possible in infants and children to differentiate the symptoms of pleurisy with effusions from those of empyema. In most children, before the age of five the effusion is likely to be purulent. In children empyema follows some acute affection of the lung in 95 per cent. of the cases. Naturally, this affection is most often a pneumonia, though bacteriological examination of the fluid shows that a mixed infection is not infrequently present. The tuberculous forms of empyema are relatively infrequent in childhood. Empyema may follow the acute exanthemata, also typhoid, tonsillitis, appendicitis, sepsis of the newly born, etc. It sometimes happens that the effusion is at first serous, later becoming purulent, without extraneous infection.

In a few cases, not necessarily tuberculous, the effusion is hemorrhagic.

The symptoms are usually masked by those of the causal affection. The temperature is usually elevated; there is more or less cough, pain and dyspnea. Exhausting night-sweats are common. The diagnosis must rest on physical signs and exploratory puncture.

The prognosis in the post-pneumonic form is not bad, except if there be complicating secondary broncho-pneumonia, or where the pneumonia persists. The prognosis of the tuberculous forms rests upon the age of the patient and the extent of the lung involved in the pleuritic affection; but, on the whole, it is better even in this class of cases than it is in adult life.

Surgical Treatment of Empyema in Children.—DOWD (*Medical News*, September 12, 1902) summarizes as follows:

(1) For simple cases of empyema the following treatment is used: Excision of about one and a half inches of the seventh or eighth rib in the posterior axillary line; light ether anesthesia is usually employed; the purulent coagula are removed; short rubber tubing, cut partly across, doubled and held by large safety pins, is used for drainage; abundant gauze dressing is applied and changed when saturated.

(2) If the patient's condition contra-indicates general anesthesia, an incision in the chest may be made between two ribs under cocain anesthesia.

(3) Aspiration is only used to give temporary relief in patients who are in great distress from the pressure of the fluid, or temporarily to relieve the second side of a double empyema after the first side has been opened.

(4) The patients are allowed out of bed as soon as is practicable, and the expansion of the lung is encouraged by forced expiration.

(5) Irrigation is only used where there is a foul-smelling discharge from necrotic lung tissue.

(6) Secondary operations are not done until good opportunity has been given for healing; usually three or four months should have elapsed after the primary operation, and there should have been no noticeable improvement for about a month.

(7) In the secondary operation the expansion of the lung should be encouraged by incising, stripping back, and, if necessary, removing portions of the thickened pulmonary pleura.

(8) The examination of forty-four of the patients at long periods after operation indicates that recovery is usually complete in the simple cases, and that there is surprisingly little deformity in most of the severe cases.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

Syphilitic Epilepsy.—FEINBERG (*Neurolog. Cent. Blatt.*, September 1, 1902).—Epilepsy is not infrequent as the result of cerebral syphilis. Irritable causes for the outbreak of convulsive attacks are found in meningeal products, sclerotic thickening of the meninges, adhesions of the meninges with the brain substance, circulatory disturbances, compression, thrombosis, obliteration of vessel with consecutive softening, the predilection of gummous inflammation for the motor area, etc. Luetic epilepsy shows itself in two forms: (1) Epilepsy without any cerebral disturbance; (2) epilepsy with cerebral phenomena which introduce or follow it. In both cases the attacks are in no way different from those of typical functional epilepsy. The author describes cases which illustrate the two types. Luetic epilepsy frequently takes the Jacksonian form. In cases of the first type, the diagnosis between tumor, dementia paralytica and epilepsy may be very difficult. It must not be forgotten that tumors may exist which are too small to create much increase in intracranial pressure, but may cause epileptic attacks for a long period of years. It is only with the growth of the tumor that symptoms follow which may allow of its diagnosis. In all cases of doubt an antispecific treatment should be instituted without delay. In two cases of specific Jacksonian epilepsy the following symptoms were found: (1) A history of constitutional syphilis, with traces of the same remaining; (2) transitory amnesia; (3) repeated twitchings in the left lower extremity; (4) slight paresis of the same; (5) sudden attacks of faintness, with temporary loss of consciousness; (6) immediately following Jacksonian epilepsy, without loss of consciousness; (7) on the following day hemiparesis of both left extremities; (8) three days later aphasia lasting six days.

The Earliest Symptom and the Importance of the Tendo-Achilles Reflex in Tabes.—S. GOLDFLAM (*Neurolog. Cent. Blatt.*, September 1, 1902).—By means of the absence of the patellar reflex, it is possible to make an early diagnosis of tabes. Initial tabes is a term given to a tabes in which the trias, Westphal, Argyl-Robertson pupil, and characteristic pain are present. As the two former symptoms may exist for a long time unknown to the patient, it is of interest to note which of these three is the first to appear. The patient naturally complains of pain first, because the other two may exist for a long time unnoticed by him. In order to solve this question, the author describes some cases where it was possible to observe the first appearance of symptoms and to follow their develop-

ment for many years. From such observations the author is convinced that the characteristic pain is the earliest symptom of tabes. The absence of patellar reflex is probably next in importance. The author calls particular attention to the disappearance of the Achilles tendon reflex at the same time. He quotes Babinski's opinion that not infrequently the Achilles tendon reflex is absent before the patellar reflex is affected.

On the Dietetic Treatment of Epilepsy.—SCHNITZER (*Neurolog. Cent. Blatt.*, September 1, 1902).—A short time ago R. Balint published a dietetic method of treating epilepsy, which was a modification of the well-known procedure of Toulouse and Richet. This consisted in so arranging the diet that in twenty-four hours about two grams of NaCl were replaced daily by three grams of NaBr, which was baked into the bread instead of the salt. In order to test the efficacy of this method, the author chose sixteen epileptics, in whom the diagnosis of genuine epilepsy was certain. The diet given to them was as follows: Daily one-half liter of milk, fifty grams butter, three eggs, without any salt, four hundred grams bread and some fruit. The bread was baked with NaBr instead of with salt, and was so made that each four hundred grams contained three grams of NaBr. The length of time of the test was forty-two days. While the result was not so glowing as that described by Balint, yet it was sufficiently hopeful to merit further trial. The result of this experiment was as follows: In two cases there was a total absence of attacks, in ten cases a very great improvement, in two a slight improvement, and in two the treatment was without result. In most of the cases the intensity of the convulsive attacks was markedly diminished.

Some Cases of Juvenile and Infantile Tabes.—OTTO MAAS (*Monatschrift fuer Psychiatrie und Neurologie*, September, 1902).—Several cases of juvenile and infantile tabes have been reported during the last year. Brasch has carefully gone over all of the cases hitherto published, and has found that only seven of them can be regarded as absolutely free from criticism in point of diagnosis. In all of these undoubted cases the etiology of inherited syphilis may be regarded as actually demonstrated. In this article six cases from Oppenheim's clinic are described. All of the cases are clinically at least tabes, some being of the juvenile and some of the infantile form. In three of the cases hereditary syphilis was the etiological factor most in evidence. Whether this form of tabes presents certain characteristics not found in the adult form is still an open question, which cannot be positively settled until a much greater material has been collected. The author also calls attention to the fact that no microscopic study of a case of undoubted juvenile or infantile tabes has yet been made. It is interesting to note that all the cases reported in this paper are females, a fact that is of more than passing moment for the reason that in adult tabes the proportion of male to female is about four to one, according to Bramwell's figures, based upon a material of six hundred and thirteen cases. This is accounted for by the fact that hereditary syphilis is found as frequently among one sex as another, whereas acquired syphilis is found more frequently in the male sex.

A Contribution to the Radical Cure of Exophthalmic Goitre, With the Ultimate Results in Eight Cases Treated by Thyroidectomy.—J. ARTHUR BOOTH (*Jour. Nervous and Mental Dis.*, September, 1902).—The groups of symptoms in exophthalmic goitre may be explained by the following classification: (1) Those cases dependent upon changes in the central nervous system; (2) those due to disease of the cervical sympathetic; (3) those arising from excessive or altered function of the thyroid gland. In the first class of cases there are distinct lesions in the medulla, which have been verified by a number of autopsies. In this group of cases no benefit is to be received from operative measures. The second class of

cases is characterized chiefly by symptoms referable to the sympathetic system. In autopsy in this class of cases thickening of the inferior cervical ganglion has been found. Operation on the sympathetic has shown good results. Under the third class there is positive proof of changes in the thyroid in a very large number of instances. The chief reasons for assuming that these cases have their origin in the thyroid are: (1) Study of clinical evidence; (2) results of experimentation; (3) post-mortem findings; (4) operative measures. The author records in this article eight cases, of which six were permanently cured, one improved and one died. The writer is not prepared to say as yet that the treatment by operative measures is the best and the most efficient, but that more marked and rapid benefit has been obtained under surgical than medical treatment. If the case does not improve under the customary treatment, too much time should not be allowed to elapse before resorting to the knife, for too prolonged a delay materially increases the risk of the operation and renders success less certain and permanent. The following conclusions are noted:

(1) Cases of Graves' disease may be completely cured both by thyroidectomy and bilateral section of the sympathetic.

(2) In view of the fact that some cases are cured by internal medication, there must be a certain proportion in which the affection does not induce structural changes in any organ.

(3) No theory can be regarded as adequate without taking into consideration the function of the thyroid gland.

(4) Three factors must be considered in the production of the disease: (a) The central nervous system; (b) the connecting fibers: sympathetic and vagus; (c) the thyroid gland.

(5) A lesion of one of these parts may produce a specific alteration in the others, the consequences of which, together with the exciting cause, may give rise to the symptoms of Graves' disease.

The Deep Reflex of the Great Toe.—G. ROSSOLIMO (*Revue Neurologique*, August 15, 1902).—This study of the Babinski reflex is based upon a material of two hundred and five cases. In ninety-two cases, with lesions of the pyramidal tract, this reflex was found in fifty-one, and was lacking in forty. In seventy-nine cases, without lesions of the pyramidal tract, it was present in eleven cases. The Babinski reflex can be simulated by the extension of the toe combined with that of the extensor tendons of the foot, or without it. The method of eliciting this reflex is as follows: The patient is either seated or reclines; the left foot is grasped by the right hand, or vice versa; the other hand supports the leg under the calf. After having determined that the muscles of the foot and of the toes are relaxed, the index finger of the right hand is applied by its palmar surface to the plantar surface of the great toe, in order to give to it a maximum dorsal flexion; then the pressure is relaxed, and the effect noted. Then either a simple trembling of the toe, mechanical in nature, takes place, which lasts until the big toe returns to its normal state, or a reflex contraction of the extensors of the flexors of the great toe occurs. The following conclusions are noted: 1. In general this reflex does not normally exist. It is only in certain cases that the phenomenon of extension can be observed. 2. Ordinarily one observes the deep reflex extension in cases of exaggerated excitability of the reflexes in general; in the majority of hysterics, neurasthenics, in acute infectious diseases, in the early period of hemiplegia and, chiefly, on the normal side. 3. In cases of pyramidal affections, where there exists at first a reflex contraction of the extensors, this latter tends to disappear and to become transformed into a reflex of the flexors. 4. The reflex flexion of the great toe is one of the symptoms of lesion of the pyramidal tract. In twenty cases of this reflex seventeen belong to this category. As to the three others, one was in a case of Friedreich's disease,

which presented at the same time a very marked Babinski. 5. The deep reflex flexion of the big toe exists always in indisputable affections of the pyramidal tract, which is not always followed by the Babinski phenomenon. Therefore, this deep reflex in flexion has a certain definite value.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

A Study of the Macroscopic Anatomy of the Hypertrophied Prostate.—ALBARAN and MOTZ (*Ann. des Mal. des Organ. Genito-Urin.*, July, 1902).—No attempt at a methodic description of the hypertrophied prostate is made, but merely a study of some special points, particularly the prostatic capsule and the relations of the gland to the urethra and the neck of the bladder; first, in their normal state, and, second, when there is hypertrophy.

The article is so profusely illustrated that to essay an abstract without the aid of the illustrations would be almost fruitless; however, the following, mostly at variance with the commonly accepted views, seems to be of interest:

The prostatic capsule is not a capsule proper to the organ, but is made up of the fibrous walls of the cavity which contains it, and its base and summit are devoid of a capsule. The urethra at the apex of the gland lies quite near its under or rectal surface, while gradually in passing backwards it approaches nearer the pubic aspect. The prostate extends upon the sides of the trigone, embracing it like a horseshoe, but does not cover it. At the bladder neck two sets of glands may be noted: One, the superficial or sub-cervical, is situated in the mucous membrane of the bladder wall; the other, the deep or true prostatic glands, has its origin beneath the muscular coat of the bladder. The deformities of the prostatic urethra are very noticeable. It is at times extensively elongated from above downward, while from side to side it is commonly quite narrow. Frequently it is very uneven, with divers recesses, pit-falls for a catheter, due to small prostatic projections. Contrary to common belief, the bas-fond commences at the level of the neck of the bladder and not behind the trigone. When the median lobe is hypertrophied, the bas-fond is situated immediately behind the neck, having for its anterior wall the most anterior part of the trigone, and for its posterior wall the posterior portion of the trigone. In hypertrophy, the gland does not cover the trigone, but the urethra and the neck of the bladder elongate. In fact, if a pin is stuck through the bladder wall at the superior median border of the prostate from without inward, it will penetrate the elongated urethra just in front of the neck of the bladder, or the neck itself. Rarely is it otherwise. Many varieties of prostatic hypertrophy are described and illustrated.

Note on the Origin of Urine Albumen.—ASCHOFF (*The Lancet*, London, Sept. 6, 1902).—As the result of the injection of various proteid bodies into animals, substances are formed in the blood which are capable of precipitating *in vitro* solutions of the proteid materials originally used for inoculation. The substances possessing this property are commonly termed "precipitins." Specific biological tests have been in this manner obtained for a number of proteid bodies. For example, an animal previously treated with ordinary milk yields a serum which precipitates the milk casein. Likewise, the serum of animals treated with albuminous urine precipitates the albumin present in fresh samples of urine. The recent experiments of Mertens appear to furnish conclusive proof

that the albumen in nephritic urine is derived from the blood. Mertens found that the serum of rabbits treated with human blood precipitated solutions of the albumins present in urine. There appears, however, to be a possible source of fallacy in Mertens' observations, inasmuch as he did not test whether a precipitate could likewise be obtained by the injection of the proteid constituents of the kidney epithelium. With the view of furnishing the necessary control that appeared to be lacking in Mertens' experiments, viz., whether the injection of kidney substance resulted in the production of a precipitin for urine albumen, the author has undertaken and reports various experiments with negative results.

Thus, as far as he has been able to carry his experiments, they tend to confirm Mertens' experiments, and to support the view that the albumin present in nephritic urine is derived from the blood, and is different from the specific kidney albumins.

The Possible Aid to the Discovery of the Tubercle Bacilli in Urine.—BRYSON (*Jour. Cut. and Genito-Urin. Dis.*, September, 1902).—Under certain circumstances it appears that the bladder may act as a collecting reservoir for entrapping and holding large numbers of tubercle bacilli when in the course of tubercular disease these micro-organisms enter the urine stream. To make a practical use of this property, Bryson has employed the following technique: After the patient has emptied the bladder by voluntary urination, a sterilized soft rubber catheter is introduced into it, and what urine flows out, or can be made to flow by hypogastric pressure, is collected in a separate vessel. The end of the catheter is now pressed between the fingers and withdrawn, thus bringing with it the urine remaining within. This is added to that previously drawn. It was always found that tubercular urine obtained in this way contained many more bacilli, and that they were more easily found than in that which was passed voluntarily by the patient. The author has used this method with satisfactory results. Suspecting that the increase in the number of bacilli might have been due to contamination from the catheter, the glycerine lubricant or smegma, various experiments and investigations were undertaken to eliminate possible error, but the results remained the same. He reports five typical cases, with photomicrographs of the bacilli, showing the great variation in numbers of bacilli found in the tidal and residual urines thus obtained.

Subparietal Rupture of the Kidney.—DAVIS (*Ann. Surgery*, September, 1902).—A case of subparietal rupture of the kidney, on which was first done a nephrotomy and afterwards nephrectomy, with a good recovery, is reported. The author then considers thirty-three cases which he has collected from literature, and having discussed the etiology, prognosis, diagnosis and treatment of the condition, quotes the opinions of various surgeons as to the advisability of suturing the kidney wound after nephrotomy.

He concludes in part as follows:

1. That the reduction in the mortality since Keen's report has been largely due to improved technique.
2. The expectant plan of treatment is permissible in cases where slight hematuria is the only symptom. Tumefaction, much blood in the urine, severe pain and history of great injury, each is a positive indication for prompt operative intervention.
3. Early operation should be done in all cases where the history of the case and the symptoms point to serious injury of the kidney. (a) Nephrotomy, with gauze tamponade, where the patient has not lost enough blood, so that little subsequent hemorrhage would not endanger life. (b) Nephrectomy, where the kidney is irreparably injured, and in less extensive injuries where either sepsis or hemorrhage is likely to prove fatal.
4. In delayed cases it may be difficult or impossible to know just what is

best to do. Every phase of the case must be considered, and then, if in doubt, operate.

5. Shock is the violent disturbance of the nervous system immediately consequent upon injury. While this is some ground for hesitation in those cases of true shock, most of the cases described as shock are depression of the vital force from hemorrhage or sepsis, and nothing short of prompt surgical intervention will prevent collapse.

6. Operate on the history of the case rather than wait for symptoms which may only suggest what should have been done earlier, but at last proclaim without hope for relief.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

The Early Diagnosis and Early Treatment of Cutaneous Cancer—Epithelioma.—C. W. WARREN, M. D. (*Med. Exam. and Pract.*, September, 1902).—Treatment of skin cancers should always be radical. The author says personally he has employed arsenical paste for many years, and still continues to do so with the best results. This he has in recent years incorporated with orthoform, with the advantage of producing less pain and without decreasing its therapeutical effect. For the past year he has combined with this a course of X-ray treatment, and in a number of instances has employed the latter exclusively with favorable although not such prompt results.

In many cases of epithelioma upon the face, adjacent to the eye, and in situations where possibly the caustic cannot be so easily applied, the coincident use of electrolysis with X-ray exposures has given the promptest and best results.

There is no plan of treatment which guards absolutely against recurrence. Many patients, especially those of advanced life, show a decided tendency to the development of new growths, and that these occur at the margin of the cicatrix produced by the destruction of the original tumor is in no way surprising, as they are often known to develop upon surfaces entirely free from local irritation or pathologically changed.

The paste which he advised some years ago to take the place of Marsden's is made by adding to white arsenic twice its bulk of orthoform and then adding water, drop by drop, until a mass having the consistency of soft cheese is produced. This is spread with a spatula over the ulcerated area, and in tumors having no ulceration it is better to scoop out the soft central portion with a curette; or, if a crust is present, to remove it. The surrounding skin is best protected from the caustic action of the arsenic by painting it with collodion, and this he is accustomed to use tinted with methylin blue, so as to make it more apparent just where the protective collodion has been applied. A protective dressing is then used and sealed with plain or medicated collodion.

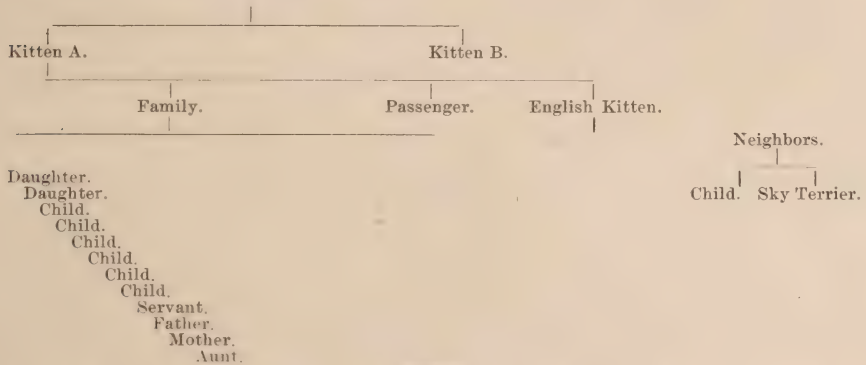
In the use of electrolysis the needle attached to the negative pole is always the one to be inserted beneath or into the morbid growth, employing from two to ten milliamperes.

In the prophylactic treatment of warts and moles a flat needle can be passed from side to side, undermining and removing the growth without cutting or hemorrhage.

There are many methods of treating this class of new growths, but the combination of caustic paste, electrolysis and X-rays appears to be the quickest, safest and most efficient.

Note on a Specimen of Tinea Microsporon of the Cat.—LESLIE ROBERTS, M. D. (*British Jour. Derm.*, September, 1902).—Two kittens, "A" and "B," resided in India, both became infected with small-spored ring-worm fungus which made their bodies a "little scurfy." "B" remained in India, while "A" was brought to England by a gentleman who became infected from the kitten. The kitten was given to a family and several of its members were thereby infected. A graphic history of the spread of the disease from some original source is copied below from Mr. Roberts' ingenious report.

Some unknown host with ring-worm:



X-ray Method—Abstracts from Dermatological Section of Seventeenth Annual Meeting of the British Medical Association.—(*Brit. Jour. Derm.*, September, 1902).—Dr. Freund, in his paper upon "Radiotherapy and Phototherapy," in speaking of the X-ray method says:

1. The effective factors in this are probably the X-rays themselves and the electric surface tension of the tube. Vaso-motor effects are produced as in ordinary spark discharges.

2. Skin diseases suitable for X-ray treatment. Clinically, one group is separated from the rest, its essential feature being the removal of hair—*e. g.*, ring-worm, favus, sycosis, hypertrichosis. In this class the X-rays are much more effective than Light-rays, but both methods stand much on an equal footing in the remaining class of cases.

3. The depilatory properties of X-ray tube are due to direct destructive action or to alteration in the blood supply of the follicles. X-rays possess no bactericidal properties.

4. In the remaining group, cell infiltration and proliferation are essentials—*e. g.*, lupus, epithelioma, in which the destructive influence of the rays is beneficial. The rays also exert a powerful influence in promoting the formation of connective tissue and cicatrices. They may act also directly on the specific poison.

5. X-raying has a more penetrative effect than can be obtained by use of chemicals. The rays in weak doses stimulate and in strong doses destroy hair growth.

6. Comparison of X-ray method and Finsen's method for lupus vulgaris. On the whole, much about the same length of time is required in the two methods. The cosmetic results of both are equally good. First X-ray large surfaces and treat remaining foci by Finsen's method.

7. Should tubes be soft or hard? The best guide to be found, not in the estimated qualities of the tubes, but in the reactions actually observed. Practically identical results can be obtained from either hard or soft tubes by adapting the time of exposure, strength of current and distance of tube. Reactions depend largely upon idiosyncrasy, and again upon the parts exposed. Hard tubes

are perhaps safer. With these the radiation can be pushed till visible effects are produced, whereas with soft tubes one must work more in the dark and make allowance for reactions before they are visibly manifest.

8. Clinical effects of X-raying: (1) Intumescence of the skin; (2) mild erythema; (3) pigment changes; (4) loosening of hairs; (5) subjective phenomena, itching and burning, etc. Importance of being able to recognize the above effects.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

Chronic Inflammation of the Pharyngeal Tonsil Without Interference with Nasal Breathing.—JAMES W. ROBERTSON (*Northwestern Lancet*, September 1, 1902).—The author calls attention to a type of chronic inflammation of the pharyngeal tonsil which is not sufficient to cause obstruction to respiration, but which represents a low grade of chronic inflammation, pouring out its secretion into the naso-pharynx, giving rise to a post-nasal catarrh which is extremely obstinate and causing various reflex disturbances, and in many cases giving rise at intervals to a subacute eustachian salpingitis or to an acute otitis media.

In this form of inflammation the symptoms differ from those present with an obstructive hypertrophy (as is the case in the adenoid vegetations in children), and the principal condition for which the patient seeks relief may be an obstinate and chronic post-nasal catarrh, sometimes accompanied by a stubborn cough, with expectoration and a constant irritation of the throat. On inspection the pharyngeal tonsil appears but slightly enlarged, is firm, and is usually covered with a mucous secretion. The nasal passages, unless there is an accompanying chronic rhinitis or hypertrophied turbinates, are usually free from secretion; but there is present a chronic discharge which may find its way forward into the nasal cavities, or, dropping down, may excite a laryngitis or bronchitis. It is attended on the patient's part by a hawking and spitting on rising in the morning in the effort to clear the throat from the accumulated discharge, which has become tenacious and dry.

The most frequent complication accompanying a chronic inflammation of the pharyngeal tonsil is the tendency to acute congestion of the gland with involvement of the nasal passages, or, as the patient states, repeated "colds in the head," during which there may be a closure of the eustachian tubes, or direct involvement of the eustachian tubes may occur from the presence of the mucopurulent secretion in the naso-pharynx, or the ear involvement may progress into a chronic otitis media.

The treatment in these cases consists chiefly in the *thorough* removal of the diseased gland by means of the curette and forceps, followed by topical treatment in the form of cleansing and stimulating applications. In many cases constitutional treatment in the form of tonics, etc., will be found necessary.

The author has reached the following conclusions:

1. That a chronic inflammation of the pharyngeal tonsil may exist without any obstruction to nasal breathing.
2. That many cases of post-nasal catarrh are due to the presence of a chronically inflamed pharyngeal tonsil.
3. That some cases of acute and chronic otitis media have their origin in an eustachian salpingitis which was due to a low grade of inflammation of the pharyngeal tonsil.
4. That in the treatment of some cases of chronic otitis media the source of

the trouble may be overlooked and no permanent improvement will follow until the underlying cause be removed.

5. That if the presence of a chronically inflamed pharyngeal tonsil were more generally recognized and thoroughly removed there would be fewer cases of otitis media.

A Case of Ulcerated Sore Throat Caused by Vincent's Bacillus.—SMIRNOFF (*Medicinskoie Obozreine*, vol. lvii, No. 4; rev. *Phil. Med. Journal*, August 30, 1902).—The author reports a case of angina closely simulating diphtheria in a woman twenty-eight years old. Both tonsils were enlarged and hyperemic. The right was ulcerated and covered with a dirty gray exudate. There was an offensive odor from the mouth and the submaxillary glands were enlarged. A microscopical examination of the exudate revealed the presence of the bacillus fusiformis of Vincent. The patient recovered in a week. The author quotes the opinion of Speranski, who maintains that such cases are not at all rare, and that the only reason why they were not discovered with greater frequency is to be looked for in the similarity between this form of ulcerative angina and diphtheria, making it impossible to distinguish the two without a microscopical examination.

A New Method of Diagnosing Disease of the Maxillary Sinus.—S. PIETRO (*Archivo Italiano di Otolgia e Larynologia*; rev. *Jour. Eye, Ear and Throat Diseases*, vol. vii, No. 4) calls attention to a new method of diagnosing disease of the antrum of Highmore. The instruments required are two rubber tubes 160 cm. long, having at one end a rubber tip for the ear and at the other a cylindrical glass tube 3 cm. long, and a tuning fork of sixty-four or ninety-six vibrations. The tips are placed in the ears and the glass tube on the outer wall of the antrum, canine fossa, corresponding points on the alveolar border, the free margins of the molar teeth, etc. The tuning fork is then set in vibration and placed on the dorsum of the nose. If either antrum contains pus, the vibrations will be heard more distinctly on that side. The writer has made observations on dead bodies and on the living, and claims this to be our most certain method of diagnosing antrum disease.

A Case of Nasal Vertigo Simulating Epilepsy.—E. WOKES (*Lancet*, August 16, 1902) reports a case of nasal vertigo closely simulating epilepsy. The patient was a man aged forty, who had his first attack in 1895. He was unconscious for fifteen minutes. The following summer had another seizure. From that time until September he had had several. Nasal trouble was suspected and he was then sent to the hospital, where a history of sunstroke fifteen years previous was obtained, and the case was regarded as epilepsy. At that time the patient was having attacks almost daily. One day he had three. His memory became defective and he wept frequently. He had an antecedant aura, but couldn't tell just what it was. When the author saw the patient he was very feeble and spirits depressed. Nasal examination revealed hypertrophies of both middle turbinates, especially the right, which was pressing against the septum. The right middle turbinate was removed, and up to July, 1901, he had had no return of the trouble, when he then had a severe seizure and several slight ones. An examination of the nose was again made and a marked hypertrophy of the middle turbinate was detected. The middle turbinate on the left side and the remaining stump on the right side were removed, and since that time there has been no return of the seizures and the patient enjoys good health.

Three symptoms as associated with the attacks in this case seem, according to the writer, to differentiate this case from one of true epilepsy. They are: (1) Hyperacusis, indicated by the loud noises observed by the patient; (2) the tendency to uncontrollable weeping; (3) loss of memory. These symptoms, especially the last two, are shown by experience to be in constant association with

the chronic form of vertigo of nasal origin. They point to extension of the reflexes to the vestibular branches of the auditory nerve supplying the end organs of equilibration. That these symptoms were the outcome of reflex irritation and were not due to a central lesion is evidenced by their immediate and complete cessation following the removal of the exciting cause.

A Contribution to Nasal Reflex Neuroses.—EDUARD ARONSOHN (*Archiv fuer Laryngologie und Rhinologie*, Zwoelfter Band, Hft. 3).—After giving a list of the various nasal reflex neuroses which have been recognized as such, the author adds a new one. The case was that of an intelligent woman who had been treated some five or six years previously with the electro-cautery for an asthma of nasal origin. The attacks were greatly diminished, but in the last year they had been returning again. Local applications of cocaine (ten per cent. solution) would relieve her, but she noticed that each application also produced a desire to defecate, which was all the more remarkable, since she was of constipated habits. Almost immediately after the applications she found it necessary to visit the toilet. The author thought at first this action was produced by the cocaine, but applications of water had the same effect. He concluded that a reflex neurosis was produced by irritation of the nasal mucous membrane.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

An Operation for Establishing a Cul-de-sac for the Wearing of an Artificial Eye—With Report of Cases.—J. E. WEEKS (*Jour. A. M. A.*, August 23, 1902).—Numerous operative procedures involving the transplantation of a flap of integument or of mucous membrane with a view to establishing a *cul-de-sac* where the conjunctival sac has contracted to such an extent as no longer to permit the wearing of an artificial eye have been devised. All have been performed with a certain measure of success, but in all failure has frequently resulted from enormous shrinkage of the graft, even in cases where the primary result appeared to be excellent. Weeks has devised the following operation, which has been uniformly successful in the five cases in which it has been resorted to: The lid is dissected from the orbital tissue, the dissection being carried to the tissue "just above the perosteum at the margin of the orbit." Canthotomy is performed if necessary. A skin flap one-third larger than the defect to be covered is removed from the inner aspect of the arm and placed in warm, normal saline solution, care being taken to trim away redundant subcutaneous tissue. The flap is fastened to the bottom of the groove by three sutures, which are "made to engage the periosteum of the margin of the orbit and pierce the integument of the cheek (or of the brow when the upper *cul-de-sac* is being restored) about 2 mm. apart." Interrupted sutures are used to fasten the margins of the flap to the margins of the defect.

The flap is maintained in position by a plate cut from compressed rubber tissue and shaped to an appropriate contour. The plate is allowed to remain in position seven or eight days. An artificial eye may be introduced at the end of three weeks.

Ulcer of the Cornea in Small-Pox.—D. C. BRYANT (*Western Medical Review*, September 15, 1902).—Prior to the discovery of vaccination, at least thirty-five per cent. of all blindness was due to the ocular complications of small-pox. At

the present time, in countries where vaccination is generally practiced, the percentage has fallen to about three and five-tenths per cent. In Mexico, where vaccination among the poorer classes is practically unknown, the number of persons blind from this cause is again very large.

Ulcer of the cornea is the ocular complication which is of most serious import. The cornea is probably never the site of a primary pustule, but the ulcer is to be regarded as an independent complication. It originates as the result of (1) pustules occurring on the ocular conjunctiva or on the edge of the lids; (2) conjunctivitis without pustular formation; (3) intense swelling of the lids; (4) as a primary lesion through the conveyance by the blood stream of the disease virus. Ulceration occurs typically late in the disease, but in the three cases reported by the writer the first ocular symptoms were concomitant with the appearance of the cutaneous eruption. Recovery is tedious, usually with the formation of a dense central leucoma.

Zonular Cataract.—J. B. STORY (*Ophthalm. Review*, September, 1902).—This peculiar affection of the lens was first described anatomically by E. von Jaeger, in 1854. It is usually bilateral and frequently congenital, and may be described as a partial opacity implicating a sphere of fibers between the clear nucleus and the clear cortex. In certain cases there are several separate zones of opacity sandwiched in between the clear zones. The volume of the lens is diminished.

Arlt was the first to point out the frequent occurrence of convulsions in children afflicted with this form of cataract. He ascribed the opacity to a disturbance of nutrition between the nucleus and cortex. Horner noted in these cases many of the signs of rickets, and supposed that a temporary disturbance of nutrition of a rachitic nature produced defects in the young growing fibers, without affecting the older central fibers. He assumed that new transparent fibers subsequently formed external to the opaque zone. The nucleus was supposed to be normal.

Beselin has recently discovered the existence of minute vacuoles in the nucleus; and Schirmer has demonstrated a similar vacuolization between the nuclear periphery and the cortex. Thus the entire lens interior to the zone of cataract exhibits pathologic change. Schirmer's explanation is as follows: "Some temporary lesion of nutrition affects the entire crystalline lens and produces vacuoles among the fibers, but these changes are only sufficiently marked in the youngest fibers to produce a definite clinical opacity, and this is the zonular cataract. If the whole lens nucleus and cortex happens to be pretty nearly equally affected we have a stationary central cataract, which may be looked upon as a sort of imperfect zonular cataract. The shrinking of the nucleus produces clefts, and to the same cause is due the diminished size of the lens in these cases."

Schirmer's theory demands the assumption that all zonular cataracts begin as total cataracts, albeit of relatively slight saturation. Hitherto no case of total infantile cataract which has subsequently developed a clear peripheral layer has been recorded. Moreover, comparing measurements of zonular cataracts (4.4-5-6 mm.) with the diameters of lenses from the seventh month of intra-uterine to the second year of extra-uterine life (5-7.87 mm.) make it difficult to believe that zonular cataract, if it implicates the whole lens existing at the time, can arise in the first or second year of life.

The editor regrets that through an oversight the paper "Is the Dislocation of the Lens into the Vitreous Ever Justifiable?" abstracted in the July issue was accredited to Dr. G. F. Luker instead of G. F. Suker.

BOOK REVIEWS.

WUERZBURGER ABHANDLUNGEN AUS DEM GESAMMTGEBIET DER PRACTISCHEN MEDIZIN. Herausgegeben von Dr. J. MUELLER UND PROFESSOR OTTO SEIFERT. A. Stuber's Verlag in Wuerzburg. G. E. Stechert, New York agent. Price per volume, containing 12 numbers, Marks, 7.50

In the April number of the *Journal* we took occasion to call the attention of our readers to this publication. It brings in each number in form of a critical review written by a recognized authority an essay dealing with a certain medical problem. The following treatises have appeared recently: "Pathology and Therapy of Stenosis of the Intestines," by Professor Bayer (Prague); "Neuron and General Physiology of the Nerves," by Professor Schenck (Marburg); "Pathogenesis and Treatment of Gout," by Docent Strauss (Berlin); "Ambulant Treatment of Fractures," by Docent Riedinger; "Modern Principles of Treatment of Fibromyomata of the Uterus," by Professor Hofmeier (Wuerzburg)

BEKENNTNISSE EINES ARZTES. Von W. WERESSAJEW. Verlag von Robert Lutz, Stuttgart. 1902.

This interesting book, by a Russian physician and litterateur, affords a minute resume of his evolution as a medical man. In a very pleasing style he narrates his first impressions in the clinical lecture room, his qualms at the dissecting table, the repugnance excited by the first operation. A fatality resulting from his first tracheotomy induces in him profound self-reproach, remorse and disgust. Critically he scrutinizes his daily progress as a medical man. He contrasts the buoyancy and enthusiasm of the student with his sense of dissatisfaction and helplessness when brought face to face with the tangible problems of daily practice. Surely far more than the vast majority of his colleagues was he overwhelmed and discouraged by the difficulties of life in general, and medical practice in particular. Recording his manifold experiences the author accompanies his narration with reflections upon a wide range of subjects of interest to the modern physician. He speaks of vivisection, of the distressing financial conditions of the Russian physician, of the influence of modern medicine upon racial development, of the great practical importance and necessity of a blind belief on the part of the patient in drugs, even though they manifestly be ineffective, etc., etc. All these problems are elucidated from different standpoints, but nowhere does the author offer a suggestion how these unsatisfactory conditions might be improved, how disagreeable necessities, such as repeated examination of very sick patients by students, could be avoided, in which way the laymen could be taught to better understand and appreciate the scientific physician's aim and work.

The writer exhibits in this book his views on modern medicine, he shows what it has achieved and exposes its deficiencies and shortcomings.

And what may be the effect of such candid "confessions of a physician?" German critics are inclined to condemn the book, since no good can be derived from telling the laity that the physician knows but little of the etiology of disease and is almost helpless in its cure. Granted, but it would surely be injustice to the author to create the impression that his book has been written only with the spirit of stigmatizing our diagnostic and therapeutic inability. We feel that the book is well capable of doing good by shattering the self-conceit of some of the younger, by disturbing the self-satisfaction of some of the older practitioners. We are convinced that no physician, who sees in his profession something beyond a simple means of making a livelihood, will finish reading this book without feeling that it contains many an idea worthy an afterthought.

And as regards its probable effect upon the laity: some chapters may do harm, some may not be understood, but many undoubtedly are adapted to driv-

ing home much needed instruction in support of the sublime position which our profession should be granted among all other vocations and trades of mankind.

TREATISE ON DISEASES OF THE SKIN. By HENRY W. STELWAGON, M. D., Ph. D.
W. B. Saunders & Co., Philadelphia and London. 1902.

This work is designed for advanced students and practitioners of medicine. It contains twenty-six full-page lithographic and half-tone plates, all excellent reproductions of the various diseases which they portray. It is the most exhaustive and complete treatise upon disease of the skin in English, even excelling in bibliographie the works by continental authors. The author has adopted the classification of Hebra, as modified by Crocker and Marrow. He considers this the most practical, his main effort in the book being to place before the reader in the most practical manner the literature and knowledge of the subject. In this effort he has admirably succeeded, for we know no more eminently practical work upon the market. When a subject is discussed so deeply and thoroughly as has been done by Dr. Stelwagon, and all the leading theories quoted, it is exceedingly difficult to remain clear and practical, but confusion has here been avoided, the writer resisting the great temptation of entering into the *melée* with "eyes in fine frenzy rolling" and a well-filled fountain pen. He has stuck to established facts, touched upon theories and has written a most excellent book; a book which is exhaustive yet practical.

DIE MASTURBATION. By DR. HERMAN ROHLEDER. Fischer's Buchhandlung, Berlin. G. E. Stechert, New York. 1902.

This is the second edition of Rohleder's well-known work. An introduction by Schiller, the director of the Gymnasium in Giessen, indicates the pedagogical purpose of the book. On the whole the author takes a moderate position concerning this most vexed question, and treats it with less exaggeration in regard to the results of the practice than is usually found in works on this subject. The closer an author comes to treating the subject of masturbation in the objective manner that other medical questions are treated, the nearer will he come to a purposeful and useful exposition. The subject is treated as if it were a clinical one, under the heads of etiology, pathology, results, diagnosis, prognosis and therapy. The subject of prophylaxis is dealt with in great detail, and the author believes that the foundation of any successful therapy must be found in prophylaxis, the first rule of which must be the careful observation of every child and the instruction from the earliest age possible in regard to the evil results of the habit. This is a much debated question, and Rohleder brings forward no more convincing proof of the correctness of this method than is found in most other works on the subject. The book is interesting and probably presents the fairest opinion of the subject of masturbation that is to be found among any recent work.

PSYCHO - PATHOLOGICAL RESEARCHES. (Studies in Mental Dissociation.) By RORIS SIDIS, M. D., Ph. D. G. E. Stechert, New York. 1902.

This is a volume of interesting investigations undertaken with the object of studying the problems presented by the phenomena of functional psychoses. The first study of the series presents the data of the main phenomena observed in dissociated states of functional psychoses, especially in regard to the psychomotor reaction of subconscious systems. The second is a study of alcoholic amnesia, dealing with the bringing out of subconscious memory. The next is the study of the growth and development of persistent dissociated subconscious systems, and the disturbances brought about by their periodic eruption in the

upper strata of mental life. The case which illustrates this study is one that would ordinarily be classified under the term of psychic epilepsy. The fourth study reviews and discusses phenomenon of mental dissociation in an interesting case of depressive delusional states. The last two deal with dissociated states in psycho-motor epilepsy. This work is an interesting addition to the psychology of morbid mental states, and the laboratory method used by Sidis gives an added value in support of the conclusions he draws as the result of his work. It must be admitted, however, that the complicated terminology is confusing, and hides well-known facts under the guise of apparently novel discoveries. On the whole, the effort of the writer to study such cases in an objective laboratory manner must be commended.

FEMMES MEDECINS, ETUDE DE PSYCHOLOGIE SOCIALE INTERNATIONALE. Tome I.:

Femmes Medecins d'Autrefois, par MARCEL BAUDOUIN. Avec 9 Photographures. Institut International de Bibliographie, 93. Boulevard Saint-Germain, Paris. 1901.

This interesting book by Marcel Baudouin on "Female Doctors" is instructive to the American public for many and various reasons. The medical profession as well as the laity imagines that only in Anglo-Saxon countries women doctors are encouraged in their pursuit, whereas a perusal of the work in hand will change our opinion in favor of many of the European countries. Of course there have been obstacles in the path that led to success, but when one remembers that the most famous women doctors flourished in the middle ages, when prejudice was great at times and seemingly insurmountable, one can but praise the results achieved. Selecting some of the women at random, we find a sketch of Agnodice of Athens, "the first champion of women who studied medicine," according to Edith A. Huntley, and who lived during the first century B. C.; of Aspasia, end of the first century after Christ—not she who was a congenial friend to Pericles, but another, who wrote several treatises on suppressed menstruation, on deviations of the uterus, on condylomata and various obstetrical subjects; of Nicerate of Byzantium, fifth century, who cured St. John Chrysostomus of a supposedly incurable disease of the stomach; of Anna Morandi-Manzolini of Bologna, 1716–1774, "a woman who was very expert in anatomy," and who occupied the chair of anatomy at the University of Bologna and was famous throughout Europe; of Laura Maria Catharina Bassia-Verati, 1711–1778, scientist and philosopher rather than practicing physician; of Salomee Rusiecki-Halpir-Pilstein, eighteenth century, probably the most famous woman practitioner of her time; and of the eccentric and apparently homosexual Henrietta Faber, 1820, who, disguised as a man and known as Henry Faber, practiced at Paris and Havana, Cuba, with great success, married a woman, had many adventures, and seems to have been a sort of Mademoiselle de Maupin. These are but a few names, and do but scant justice to the book. To appreciate the industrious research of the author, one must read it at one's leisure, and by doing this, one's mental latitude in regard to a subject so little known will be greatly increased.

CHIRURGIE DE L'UTERUS, par HENRI DELAGENIERE. Avec 378 figures dans le texte. Institut de Bibliographie scientifique, 93. Boulevard Saint-Germain, Paris, 1898. Price, 10 francs.

The author, whose reputation as a gynecologist reaches beyond the borders of his native country, presents us, in his "Surgery of the Uterus," with an elaborate work. The book is divided into five parts. The first of these contains the surgical procedures on the ligaments of the uterus. The following parts give us the operations on the uterus itself, which are divided by the author into operations on the non-pregnant and those on the pregnant uterus. Each opera-

tive procedure is treated in a separate chapter and in a certain constant succession. At first we find the definition and synonyms of the operation in question. Next comes a short historic review of the development of this operation. The following paragraph is devoted to the technique, including the preparation of the patient, the instruments, etc., and is given more in detail according to its importance. Just this paragraph demonstrates that the author is not only familiar with the literature at large, but that he himself has contributed quite a number of surgical procedures to our therapeutical treasure. After the technique the author proceeds to a description of the results of the operation in hand, and, furthermore, of the accidents and complications either during or after the operation. At the end of each chapter the indications to the operation are discussed.

From these short remarks the reader will undoubtedly have gained the impression that the arrangement of the reading matter is an unusually clear one, and we may add that the French wording is excellent, precise and very easy to read. This book is not written for the medical student. It will be of decided benefit to the gynecologist and the numerous general surgeons who perform operations on the female genitalia. But also the general practitioner will peruse this book with great advantage. It gives exact information as to the different indications for each operation, and it will make him familiar with the therapeutical resources of the surgery of the uterus.

A MANUAL OF OTOLGY. By GORHAM BACON, A. B., M. D., Professor of Otolgy in Cornell University Medical College, New York; Aural Surgeon New York Eye and Ear Infirmary. With an introductory chapter by CLARENCE JOHN BLAKE, M. D., Professor of Otolgy in Harvard University. Third edition, revised and enlarged, with 120 illustrations and 7 plates. New York and Philadelphia: Lea Brothers & Co.

The fact that a third edition of this Manual has been issued since the first appeared in 1898, shows its popularity. The present edition has been enlarged, and a considerable number of original illustrations added. Among the new topics considered are Lumbar Puncture and the Significance of Leucocytosis. It is in every way a practical work and meets the demands of the student.

A PRACTICAL TREATISE OF SMALL-POX. Illustrated with Colored Photographs from Life. By GEORGE HENRY FOX, A. M., M. D., with collaboration of S. D. HUBBARD, M. D., S. POLLITZER, M. D., and J. H. HUDDLESTON, M. D. J. B. Lippincott Co., Philadelphia and London. 1902.

This work is practically an atlas upon this subject, and coming from that past master of dermo-photography, Dr. Fox, at once appeals to those who know his beautiful and accurate productions. Atlases usually are merely of value proportionate to the accuracy of the pictorial productions, but in this work the text is equally of value. As the author says in his preface, small-pox pictures ordinarily represent the pustular stage only, but in the present work he wishes to display the earlier stages as well as it is during that period that diagnosis is most important and difficult. Sixteen most excellent and life-like plates, representing the disease in its various and modified stages, are included in this collection.

BEITRAEGE ZUR AETIOLOGIE DER PSYCHOPATHIA SEXUALIS. Von Dr. IWAN BLOCH. Erster Theil. Verlag von H. R. Dohrn, Dresden. 1902.

Since the term "psychopathia sexualis" has been coined by Krafft-Ebing the opinion has gradually gained ground that sexual perversity is a disease *sui generis*, found, as a rule, or as other authorities claim, only in hereditary predis-

posed individuals. Bloch opposes this view, offering as arguments a considerable number of facts which, partly, have been unknown up to this time, and, partly, have not been recognized as regards their importance to the subject in question. Bloch is more successful than most of his predecessors who have dealt with this subject, because he approaches it, not from the prejudiced standpoint of the physician, but from the point of view of the anthropologist and ethnologist. He demonstrates that the manifold causes for all forms of sexual aberrations can be found everywhere, absolutely independent from time, location, race, culture or heredity. In his opinion, the belief of sexual perversity, or especially homosexuality, being inherited conditions, should finally be abandoned.

This book, being the first volume of an elaborate treatise on the Etiology of Psychopathia Sexualis, marks a significant advancement in our knowledge of this intricate problem.

INTERNATIONAL CLINICS, Volume II, Twelfth Series. J. B. Lippincott Company, Philadelphia. 1902.

Like its predecessors, this handsome volume contains many articles of considerable interest even though there be in them but little that is new. Prof. Ernest Finger, of Vienna, discusses the treatment of acute urethritis from a rather conservative standpoint. A valuable article is the one on treatment of simple ulcer of the stomach, by Dr. Albert Rodin, of Paris. The chief interest of the volume, however, centers in two "special articles": one by Dr. E. L. Munson, on the work and organization of the medical department of the United States army, and one by Dr. H. A. Kelly, upon the management of a modern private hospital. Both articles are well illustrated.

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ORIGINAL ARTICLES.

THE ENLARGEMENT OF THE PELVIC OUTLET DURING LABOR.

BY DR. JULIUS NEUMANN, of Vienna, Austria,

DOCENT OF OBSTETRICS AND GYNECOLOGY, UNIVERSITY OF VIENNA.

The bony pelvis does not represent a fixed cavity of constant and invariable dimensions.

It is generally known that the motility of the os coccygis alters the length of the conjugate of the anatomical outlet considerably, and that a slight rotation of the sacrum in the Walcher posture increases the length of the true conjugate. This latter fact especially is frequently applied to practice by the modern obstetrician.

An unusually marked motility of the pelvic articulations has been observed in some instances, especially in kyphotic pelves. Korsch (*Archiv fuer Gynaek.*, vol. xix, p. 475) described a case in which he noted during labor an increase of fully three cm. (from six and one-half cm. to nine and one-half cm.) of the transverse diameter of the outlet. He found at the post-mortem of this case a remarkable mobility in all the pelvic joints.

I began as early as 1895 in Professor Schauta's clinic to measure pelves during labor after the method of Breisky. So far as I know, I was the first to find that during labor not only the transverse diameter of the outlet, but also the sacro-pubic diameter may be enlarged and that this occurrence is not limited to kyphotic pelves.

This conclusion was based upon the results of repeated measurements made in nine cases. The formations of these pelves were as follows: Four idiopathic funnel-shaped pelves, one flat rachitic pelvis without contraction in the transverse diameters, two generally contracted flat rachitic pelves, one pelvis of the juvenile type and one of about normal dimensions. Of all these pelves with one exception the inlet was only slightly contracted or normal, while the transverse diameters of the outlet varied between eight and ten and a half cm., the sacro-pubic diameters between eight and ten cm.

All children were born in O. A. position, six spontaneously, three with the help of the forceps. They were all alive and their weight ranged from 2200 to 3750 grams.

An enlargement of the transverse diameters of the outlet during labor was observed in every case, the maximum being, in one case, two and a half cm. The enlargement could be noted as soon as the fetal head entered the pelvic cavity. In six of these cases an increase could be observed also in the length of

the conjugate of the obstetrical outlet—*i. e.*, of the sacro-pubic diameter—being in one case fully two cm.

I wish to emphasize that I do not believe that this expansion is a typical occurrence during the stage of expulsion. I was able to determine the absence of such an enlargement of the transverse diameters in several cases, and of the conjugate of the obstetrical outlet in one instance.

I wish to report however merely my observations. While unable to give even an approximate figure of the frequency of such an enlargement, I may say that I found a certain mutability in the dimensions of the inferior pelvic straits quite often. The number of these observations being limited, I am not ready to say whether this mobility is more pronounced in certain forms of pelvic deformities, whether it is dependent on the general condition of the skeleton, on the age of the patient, or possibly on the number of preceding confinements. One thing, however, is certain: if the child's head is small or soft this enlargement does not take place.

It may be appropriate to emphasize that in none of these cases a rupture of the pelvic articulations occurred, and that every one of these patients left the bed in due time without showing any disturbance in locomotion.

In all probability this enlargement is produced by the force of the descending head, the pelvic articulations having been unusually relaxed and lessened during pregnancy.

The theory of the increase of the bony pelvis during labor originated with Hippocrates. It was later repudiated and forgotten, because there were no means to prove it. As late as 1870 Breisky published a method of measuring the pelvic outlet, which yields very satisfactory results. Since this time, investigations as regards the change of the bony pelvis have been conducted by some authorities, but with the exception of those made on kyphotic pelvises, as mentioned above, they have been limited to cadavers. So far as I am aware, I was the first who endeavored to test Hippocrates' theory by means of systematic examinations of the living.

The questions which will have to be answered are the following: 1. In what percentage of cases does this enlargement of the dimensions of the obstetrical outlet take place? 2. How great can it be? 3. What conditions favor this phenomenon? 4. What effect does this increase or a complete absence of such exert on the mechanism, course and management of labor?

I do not doubt that these questions can be satisfactorily answered if such measurements are executed more extensively and more general use is made of examinations by means of the X-rays.

In the management of labor to-day we take into account the moulding of the head, the increase of the pubo-coccygeal diameter and of the true conjugate in the Walcher posture; at some future time we may have learned to put to practical use this enlargement of the sacro-pubic and the transverse diameter of the pelvic outlet.

CARDIAC DILATATION AT PUBERTY.

BY ALFRED FRIEDLANDER, M. D., of Cincinnati.

The period of puberty is one marked by great developmental changes in the individual, mental, muscular and sexual. For the cardio-vascular system this is a most important transition period. Growth is especially active here, a growth demanded by the increase of physiological function of the various organs.

During the earlier years of life the increase of weight of the heart, though steady, is not very rapid. Beneke has shown that from the sixth to the thirteenth year the annual increase is only about eight per cent. At the time of puberty, however, the rapidity of growth becomes much greater. Thus if we compare the volume of the heart to the width of the ascending aorta, we find that before puberty the ratio is approximately 140:50; after puberty, 290:61. In other words, the blood pressure is much higher after puberty than before.

Broadly stated, the tissues grow more vigorously, respond more readily to stimulation in childhood and early adolescence than in later life. But, per contra, the tissues of the young individual are more yielding, more apt to give way under strain than is the case in maturity. Therefore, if additional demands are made upon the heart of the growing child, hypertrophy—a physiological hypertrophy—will the more easily ensue. But for the same reasons, if the strain and the demands upon the muscular power of the heart be too great, dilatation will the more easily occur.

It is thus apparent that at the time of puberty the heart is in a condition of what might be called unstable equilibrium. The other organs of the body are in a state of change, too; new functions are being established, the organs performing them demand greatly increased nutrition, thus adding to the work of the heart.

Under perfectly normal conditions, however, the heart is able to perform its additional work adequately.

Perfectly healthy children are able to go through the pubertic period without any appreciable ill-effects. The physiological processes go on gradually and easily, the growing organism adapts itself to changing, and finally to changed, conditions without undue strain, and the youth enters on the post-pubertic period of development easily and naturally.

Unfortunately the conditions are often not normal. The bad effects of hereditary taints, of constitutional diatheses, the evil results of antecedent diseases of childhood, or of chronic disturbances of nutrition, unfit the child for what may truly be called the period of developmental stress.

An added factor of far-reaching import, mentally and physically, is that of school overwork, with all that this implies.

These are, however, merely the predisposing causes of the form of cardiac dilatation under consideration. Its exciting cause is usually to be found in direct muscular strain. For it is just about the time of puberty that children begin to indulge in the more severe forms of muscular exercise. Bicycling, baseball, tennis and golf, long-distance running and swimming begin to be attractive. The child enjoys them; they offer a welcome, often a needed, diversion after the close confinement of the school-room. But though such exercises in moderation may be highly beneficial (unless there be special contraindication), they are often,

if pushed to extremes, distinctly injurious. And the child is apt to push them to extremes. The warnings of fatigue are disregarded, frequently from a disinclination to "give in before the others do." A single overexertion need not be attended with lasting injurious effects. But such strain often repeated begins to show itself by unmistakable signs. The reason for this is to be found in the fact before alluded to, that the heart is at this time in a transition state. There is a lack of reserve energy to meet these conditions, for the heart is already taxed nearly to its limit by its necessarily increased functional activity.

Presently the boy (for obviously the condition obtains oftener in boys than in girls) notices that he gets out of breath and weak after even moderate exertion. He may complain of severe palpitation at such times. He is often pale, sometimes even slightly cyanotic. The appetite begins to be capricious, the sleep disturbed and restless. The symptoms become more and more manifest the longer they are allowed to go uncorrected, the longer the exciting cause is allowed to exist.

Physical examination of the heart in a moderately developed case, even, shows a rather diffuse apex beat displaced to the left of the mammary line. Percussion reveals an increased area of precordial dullness, transversely, varying, of course, with the degree of dilatation. On auscultation the first sound at the apex is prolonged, or there may be a distinct systolic bruit. This bruit need not be limited to the apex, it may in fact be heard over almost the entire precordia, but it is, as a rule, not transmitted to the angle of the scapula. The second sound over the pulmonary is often *not* accentuated, but the second aortic sound may be clear and sharp. The pulse is soft and compressible, its rate usually accelerated, and there may be slight irregularity.

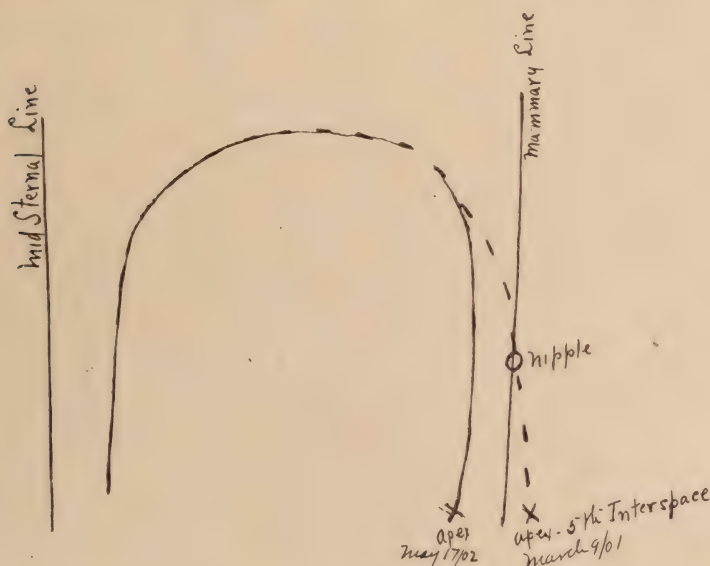
While under such circumstances the diagnosis of the cardiac dilatation itself is not difficult, it is not always easy to determine at once whether we are dealing with simple myocardial weakness or some graver form of heart lesion.

This is particularly true if there be a history of antecedent rheumatism or chorea, and if the signs and symptoms of valvular lesion be present. In such cases it may not be possible to make the definite diagnosis at once. Such cases are, however, the exception, and ordinarily the recognition of the condition after a careful inquiry into the history, and a thorough examination, offers no especial difficulties.

In uncomplicated cases, where we are dealing with pure muscular overstrain, the prognosis is generally good. The recuperative power of the heart muscle at this time is very great. Where the mechanical congestion has been of short duration, where the consequent fibroid change in the muscle wall has not taken place to any great extent, the muscle recovers its tone easily when the exciting cause of its weakness is removed. Then, too, in children the toxic causes of cardiac myopathy, alcohol, tobacco, gout and syphilis, do not play nearly so important a role as in adult life, and their injurious effects are proportionately diminished or absent.

The first requisite of treatment is, therefore, the removal of the exciting cause, muscular overwork, and this is to be accomplished by putting the child absolutely at rest. It is always hazardous to allow the child a "moderate amount" of exercise in these cases, for the reason that the child's idea of "moderate" is apt to be the simple limit of inclination. If the symptoms be at all urgent, and particularly if the dilatation be at all pronounced, it is best to insist

upon rest in bed, with the child flat on its back, for several weeks. In no other way can the work of the heart be so easily minimized, in no other way can the heart so quickly regain its tone. During this period the diet should be light and nutritious, but should contain the minimal quantity of fluid, so that the volume of blood to be pumped can be reduced as much as possible. In the search for easily assimilable food the mistake is often made of allowing the child as much milk as it will take. It is true that milk is an easily digested food for most children at twelve or thirteen. But the nutritious element here is, of course, very largely diluted, and the large volume of fluid taken throws additional work on the heart. The same thing is true of soups and broths. Liquid food should be given in as small quantity as possible, not exceeding one and one-half pints in the twenty-



four hours. This regimen is not always carried out easily, and often requires all the physician's tact, perseverance and firmness, but it is an important factor in the therapy.

In the beginning, especially if there be great irregularity of the heart's action, digitalis is often of value, and strychnia is frequently of service at all stages. But after all, it is more important to lessen the work of the heart than to stimulate the heart up to doing an increased amount of work. And this lessening of the heart's work is best accomplished by rest. The bowels should be regulated, and anemia combated by ferruginous tonics.

Even after the child is up and about again, all severer forms of exercise must be strictly interdicted. And this restriction of exercise should last for a very considerable time, a period measured by months rather than by weeks. The kind and amount of exercise to be allowed will be questions calling for the most conscientious judgment of the physician, and the decision will only be reached after careful study of the peculiarities of the individual child.

As an illustration of the type in question a few brief notes of a case recently under observation may be appended:

M. A., male, æt. thirteen and one-half years. Always well and strong. Recently has had a good deal of palpitation and dyspnea after exertion. Has been indulging in much violent exercise of late, especially "hare and hound" running. Examination March, 1901, shows distinctly increased area of transverse cardiac dullness, apex beat diffuse, systolic murmur at apex. Pulse, 110; slightly irregular; tension low.

Under rest in bed for three weeks, diet and a tonic, condition improved rapidly, and within four months there was no dilatation, and no bruit. In February, 1902, had a severe double broncho-pneumonia following an attack of measles. The heart remained in good condition throughout the attack and showed no dilatation afterwards.

The figure (p. 589) shows the area of precordial dullness traced after the method of Lees and Poynton. The dotted line shows the limits in March, 1901, the other on May 17, 1902.

SOME STUDIES OF THE PERIODICITY OF INEBRIETY.

By T. D. CROTHERS, M. D., of Hartford, Connecticut.

The alternation and periodicity of the functions of the brain and nervous system have not been fully studied. Periods of sleep and wakefulness, the rise and fall of temperature, rhythm of heart pulsations and changes in cardiac pressure, the nutrient and reproductive periods are all common physiological periodicities.

This same mysterious alternation appears in the diseases and degenerations of the brain and nervous system. The periodic neuralgia, migraines and epilepsies are familiar illustrations.

In insanity the *folie circulaire* is equally noticeable. This rise and fall of nerve functions, changes in habit and alternations and relapses in disease suggest a field of laws and forces that is largely unknown.

The inebriate who drinks to great excess at distinct intervals and abstains totally during the intervening time is a type of the periodic character of these strange cycle degenerations.

At one period the victim is a rigid moralist and strict abstainer, and often by word and example is a temperance teacher of an aggressive type, whose views are emphatic and earnest. Later he is secretly and openly an excessive drinker and a low intriguer, displaying the most opposite traits of character and conduct. Some general statistics indicate that over fifty per cent. of all inebriates are of this periodical class.

The length of the free interval varies widely, in some cases recurring at distinct intervals not varying more than a few hours; in others the free interval is very irregular, apparently depending on unknown conditions of environment, while in still others it follows certain functional derangements and disturbances of nerve and brain health. In certain cases the attack appears as suddenly and mysteriously as a flash of electricity in a cloudless sky.

The clinical history of these cases reveals several distinct classes with widely varying symptoms and conditions.

One of the most prominent groups I have ever met are the insane impulsive periodics. The drink craze comes on abruptly when least expected. Thus, at

some unexpected moment the patient relaxes, often when his presence and judgment are most essential to success. As an example, on the eve of marriage or some social, political or literary triumph or business success this delirium appears.

He will disappear and conceal his condition or may boldly display his drinking in opposition to all advice or entreaty. Then suddenly he will realize his condition and make a great effort to recover. Intense sorrow and grief, coupled with explanations, prevarications and earnest efforts to repair the losses will follow. Often he will ascribe his recovery to some means or remedy taken at the last moment and defend it with delirious faith and energy.

He is unable to give any rational idea for the motives or reasoning which preceded the drink craze.

The memory is always vague as to the nature of his acts. Although events may be clear, the higher consciousness is cloudy. The reason and judgment seem to be suddenly arrested by some morbid impulse which palsies every other consideration but its gratification.

Men of this class will display delirious zeal for the temperance cause and be very prominent in revival and other religious meetings during the free interval and continue it during the onset and decline of the paroxysm. The height of the attack is marked by coma or extreme delirium, with delusions, hallucinations and hyperesthesia running into intense egotism, ending in a period of bold hypocrisy and self-deception.

Another class of these periodics will display distinct premonitory symptoms of the drink craze and will be clearly unconscious of it. The more common of these symptoms are degrees of unusual excitement or depression, great business energy or apathy, or especially brilliant mentality or the opposite.

Often they exhibit alarm for their future state, fear of poverty or dread of sudden death. Then suddenly the drink delirium appears and an entire change follows. When this subsides the old delusions are not taken up. Deep depression generally follows, with a partial or total blank of memory or a delusion of some particular pleasing or unpleasing event in the paroxysms.

Not infrequently marked hallucinations and delusions continue for a long time. The drink insanity is sometimes filled with short periods of pretended effort to abstain, of intrigue and low cunning to defeat the efforts of others to help them.

Such men appear at the prayer and temperance meeting, appeal to the benevolent and pose as examples of cure by some strange mental or moral remedies. Egotism seems to be a dominant mental symptom, together with duplicity and prevarication.

A third class after a period of prolonged sobriety will have premonitory periods of delusive reasoning, such as ideas that they have some disease which requires spirits as a remedy. They appear in good health and seem oblivious to any past experience in which this same idea preceded former paroxysms. After a drink of spirits as a medicine the drink storm comes on. When this is over they do not stop spirits abruptly, but continue in decreasing doses until final subsidence. Then comes a period of food and health delusions, marked by unusual care of themselves, their surroundings and nutrition.

Such cases are not unfrequently checked in the midst of a drink paroxysm

by some powerful mental emotion, as an appeal to their fears, forced change in their surroundings or abrupt shocks to their ambitions or purposes in life.

Often the paroxysm is masked by some condition which breaks out again when these restraining states are removed.

This class is prominent for the mental symptoms of paranoia and defects, and are rarely seen occupying positions of trust and responsibility long. They develop general paralysis and melancholy and often die of suicide.

A fourth class are noted by the exact recurrence of the drink cycles irrespective of all conditions and surroundings of life. The paroxysm is sudden and impetuous, and the mind is filled with delirious conceptions of pleasure from the taste and effects of alcohol. This state may be concealed for a time, but grows steadily until full gratification follows. Such cases suddenly assume some burden of reform, with a secret hope to break up their imperative conceptions.

The most careful plans for the concealment of the drink storm are often made, which end abruptly with no especial depression or moral regret.

The memory of acts committed during the storm is cloudy, and the free interval never varies in time, and hence a certain expectation is created in the mind which prepares for it. Many of these cases are engaged in the work of helping others, and exhibit strange acts which are only explained by the presence of this fated periodicity. These cases never give any rational reason or explanation of their conduct, and as a rule always try to conceal it.

The heredity of these cases is prominent. So far, over ninety per cent. of all cases of periodicity have a neurotic heredity. Insanity, epilepsy, inebriety, hysteria, idiocy, dementia, paranoia, also phthisis, rheumatism and the various organic heart diseases are present in the parents and grandparents, indicating an irresistible neurotic degeneration coming from the ancestors. All these neuroses are interchangeable, and may break out in periodic inebriety from special and unknown exciting causes. The recurrence of the drink paroxysm is in itself evidence of a neurotic origin involving the higher controlling centers.

The drink craze, as at present understood, is a symptom of central nerve and cell debility demanding relief from the narcotic action of alcohol. Why these states of brain anemia and cell irritation should gather and explode at periodic intervals is not clear. The same states of degeneration, both acquired and inherited, appear in epilepsy and other neuroses, showing that they are clearly allied family diseases, only varying in symptoms.

As in epilepsy, the periodic inebriate suffers from disturbance of the coordinating and inhibitory apparatus of the higher brain center.

Nerve energy is not liberated along motor tracts, but through mental areas in the impulse for relief from the paralysis of alcohol. The discharging energy is neutralized by chemical restraint.

The physical and psychical irritation of the brain centers is overcome by continuous narcotism (for the time). Then a period of normal activity follows, in which this explosive impulse is dormant. These paroxysms resemble epilepsy in origin, onset, duration and termination. They differ in being confined to consciousness and mentality, with a central impulse for relief. After the explosion the mental operations seem normal and along the levels of comparative health. Opium and other narcotics will bring the same relief as alcohol at these times, but probably they are followed by more organic disturbance which demands their continuous use.

In all probability periodic inebriety is largely a masked form of epilepsy, and is the result of special unknown exciting causes and conditions. The steady drinker will, after a time, have alcoholic epilepsy or epilepsy from continuous irritations of the cortex.

The epileptic will often become a periodic inebriate, manifesting at times a delirious craze for alcohol and then having a free interval of sobriety. The same causation seems to be present in both. The same profound cerebral anemia or irritation that breaks up co-ordination and perverts nerve energy, may develop into a convulsive discharge through the motor tract, or a convulsive impulse for spirits and relief.

These periodicities are more common after twenty years of age, when the organic activities of the brain have become matured, and often subside or merge into some serious nerve or brain degeneration before fifty. In many cases they appear to follow a natural cycle, beginning in a short period of continuous drinking, then a drink paroxysm with long, free intervals. The length of this paroxysm increases up to a certain point, then grows shorter. Commencing in a single day or night's indulgence, it grows until it covers two or three weeks of time, then becomes less and less until finally a day or a few hours is the utmost limit of toleration. The system then refuses to retain any more spirits and an intense loathing and repugnance follows. The free intervals likewise change, at first extending over months and often one or two years, then grow gradually shorter until they reach a minimum of a day, then increase until the drink craze finally dies out or death follows.

This rise and decline in the length of the drink period and free interval, point to some unknown law of accumulating nerve force and degeneration.

The force generated in the nerve centers concentrates and reaches a degree of tension that is only discharged in the acute delirium and coma of alcoholism. The narcotism of opium, chloral and other drugs is rarely followed by repugnance or a free interval of relief and rest. Hence, the treatment of these drink paroxysms by the substitute of other drugs is always dangerous.

Is it possible for any one to be narcotized for a week or more at different intervals and retain normal reason? Does the brain fully recover from these explosions and the chemical and physiological action of alcohol, when used to excess, even though followed by a free interval?

The popular opinion, even among physicians, is that such symptoms are often signs of genius and capacity, and are rarely to be considered as evidence of disease.

Clinical study brings no support to such views, but, on the contrary, points out grave changes of the higher brain centers, seen in failure to reason and to control the functional brain activities.

While the higher and psychic brain steadily degenerates, the lower motor and automatic brain goes on masking and concealing the evidence of disease.

Along the normal lines of every day's thought and work the apparent health of the victim is unquestioned; but vary this, and his real condition is apparent.

Let the periodic inebriate change his occupation and surroundings, and this incapacity and unsoundness will be prominent. Practically the periodicity of the drink craze, together with its intense, unreasoning demand for narcotism, is an unmistakable sign of disease.

Literally both the morbid impulse and the effects of its gratification break up the co-ordination and the inhibition of the higher brain centers, impairing the capacity for healthy reasoning and leaving states of debility and unsoundness.

The failure to realize this fact is followed by very serious losses, accidents and tragedies every day.

The periodical inebriate should, of all others, receive immediate medical care. There is impending peril and danger in his case, far more than in the regular drinker. His case should be studied, and the various predisposing and exciting causes removed, and the real disease discovered of which the drink craze is only a symptom.

While the periodical inebriate may live many years and attract no attention, medically he is always the center of possible grave irregularities, epilepsies and paralyses. His conduct is a succession of disappointments, of failure and losses, as viewed from the moral side. Overweening confidence and boasts of strength, and abject failures, are constantly repeated. Many of these cases become paranoics and dangerous to society.

The very complexity of the causes and symptoms make them fit subjects for delusions and epidemic credulities and enthusiastic supporters of all the changes and events involved in mystery. The mystery of these drink cycles in themselves prepare the mind for credulous, unreasoning superstition and conduct.

The number of periodic inebriates in all conditions of life is very large, and while they do not attract much attention, are unquestionably the most dangerous brain and nerve defectives in the community. They are amenable to treatment and are both curable and preventable.

The periodical inebriate, like the epileptic, has been mustered into an organized cycle of degeneration and death, and there is no escape except by applied rational science.

This is the new psychological territory opened for exploration, with its boundless wealth of facts and laws pointing to causes and conditions that are preventable, awaiting discovery and application and promising a new era in medical science.

As a summary of this brief study:

1. The periodicity of the drink paroxysm is unquestioned evidence pointing to central brain disease.

2. Heredity, nutrition, mental exhaustion and environment are all very common causes or predisposing factors of this condition.

3. Allied diseases, of which epilepsy is very common, are associated with this, and similar affections are interchangeable.

4. The drink periodicity follows a uniform line of events, ending about the same way in nearly all cases. Its varieties and symptomatology are practically the same in the regularity of origin, development and termination.

5. These cases are the most uncertain and dangerous of all drink neurotics and are the least understood. The prognosis is uncertain and full of dangerous possibilities.

6. These cases are very susceptible to treatment when the measures are applied scientifically and with full knowledge of the causes. Their inebriety is more positive than that of other inebriates. The drink impulse is often con-

trollable and frequently disappears with treatment. This class requires the most careful medication and study.

7. Medico-legally, the most important problems are associated with these drink paroxysms. Each case requires special study and is to be judged from general principles of physiology and psychology.

8. Such cases of necessity have impaired brain and nerve control and cannot be measured by the rule or standards of mental health.

9. These cases should receive careful study and examination. Tabulated facts of sufficient number and accuracy are needed from which to draw accurate conclusions, covering the laws which govern this class of neurotics.

CLIMATOLOGICAL FEATURES OF PLAGUE IN MANILA.

By W. J. CALVERT, M. D., of St. Louis.

PATHOLOGICAL LABORATORY OF MEDICAL DEPARTMENT, WASHINGTON UNIVERSITY.*

From the second century B. C. to the present time history records numerous epidemics of plague on the shores of the Mediterranean, in the northern portions of Europe, Russia, England, and in some districts of Asia. The location of these countries in subtropical, temperate and colder climates, and the absence of records of epidemics of plague in tropical countries, gave rise to the general opinion that plague could not thrive in a tropical climate. For years, the strongest argument in favor of this opinion was the absence of plague in the upper tropical portions of Africa during the numerous severe epidemics of the disease in the lower districts of Egypt. Usually a diminution in the severity of an epidemic precedes or accompanies the advent of the hottest season. On this fact is based the saying that plague will not thrive in hot, dry weather.

Recent epidemics have disproved the old idea that plague could not thrive in the tropics and during the hot season of the year. As proof of the former, may be cited Koch's discovery of plague in tropical Africa, and the recent outbreaks of the disease within the tropical zone; of the latter, the severe outbreaks of plague in Constantinople during the hot season of 588, in Malta in 1812, and in Algiers in 1813. Numerous epidemics of plague have occurred in severe winter time. While plague has and may occur in extreme hot and cold weather, a moderately high temperature and humid atmosphere are most favorable to the development of severe epidemics.

Manila is 14° north, surrounded by moderately high mountains, and located a few feet above mean high tide. During extreme high tides a large portion of the city is inundated.

According to Fig. No. 1, the year may be divided into three seasons: First, hot, dry; second, rainy; and third, winter season.

The hot, dry season begins about the middle of February and continues to the latter part of May or middle of June. During these months the temperature is high for weeks without a single intermission. In 1900, a maximum temperature of 98.8° F. was recorded on April 6th. The nights may be somewhat cooler. On March 1st a minimum temperature of 67.1° F. was observed. Dur-

* Observations made in Pathological Laboratory of Board of Health, Manila, P. I.

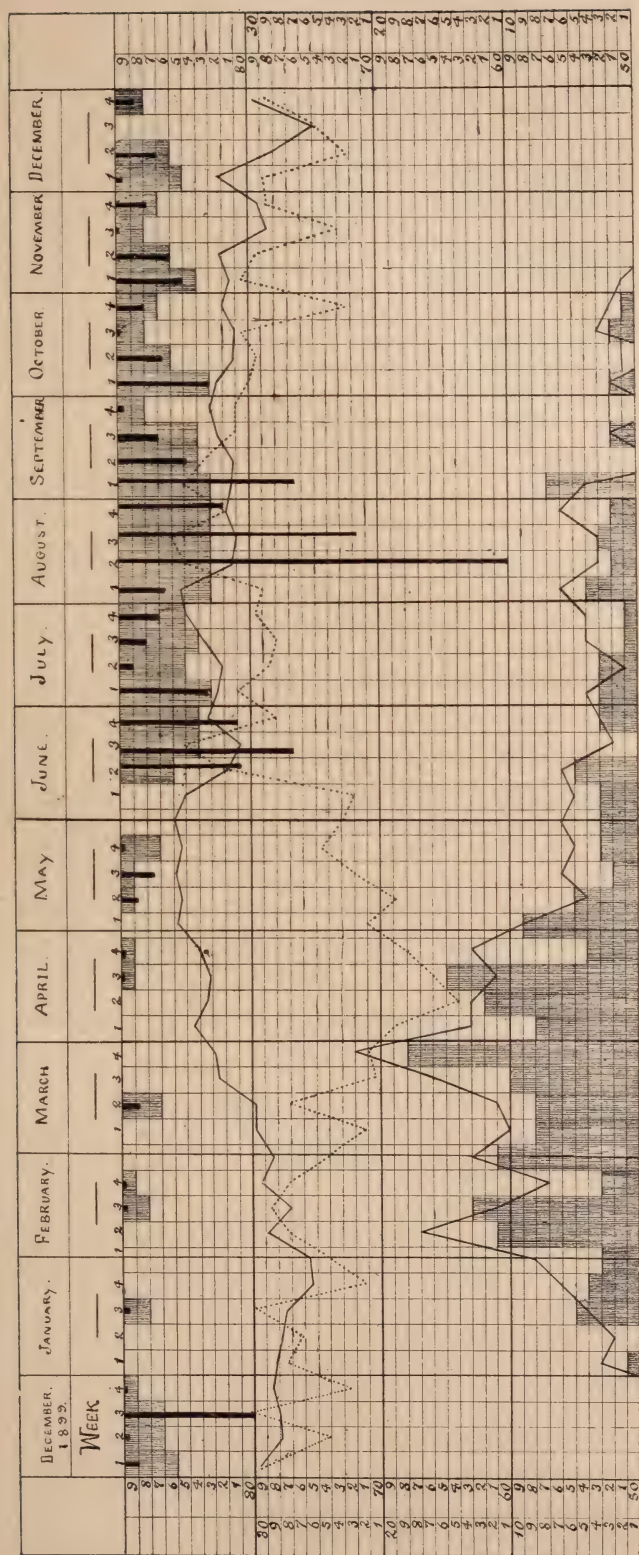


FIG. 2.

Same as Fig. 1, except each horizontal line represents one case of and one death from plague; each perpendicular line, one week; shaded columns at top of chart represent rainy days, black columns, inches rainfall; each horizontal line represents one rainy day and one-half inch rainfall; shaded columns at bottom of chart represent deaths from plague.

for from seven to fourteen days, during which time everything is saturated with water; indoors is almost as wet as outside. During October and November the rainfall gradually diminishes from week to week.

Winter extends from the end of the rainy to the beginning of the dry season. During the early portion of this season light showers occur, while the remaining portion is almost free from rain. Low temperature continues for weeks; mean temperature for January, 1900, was 77.6° F. Winter in Manila is very pleasant; the days are not too hot, and the nights are cool, resembling our early fall.

Throughout the year the monsoons materially diminish discomforts due to the climate. Excepting a few days in the hot, dry season and during typhoons, land breezes occur in the forenoon, and sea breezes in the afternoon and evening.

Early in January, 1900, plague was discovered in Manila. The number of cases increased from fifteen in January to seventy-two in March. This was the largest number for any single month. From March the number of cases of plague gradually decreased each month until November. In this month one case was found during the first week. From the second week in November to the last week in December no plague was found.

The second epidemic was in progress from the third week of December, 1900, to the last of June, when my records end. During the second epidemic the number of cases of plague increased from five in January, 1901, to one hundred and thirty-seven in May; after this time the number of cases rapidly diminished.

In 1900 the height of the epidemic was in March, or one month before the lowest mean humidity, and two months before the highest mean temperature. In 1901 the height of the epidemic occurred in May, one month after the lowest mean humidity, and during the month in which the highest mean temperature was noted. In other words, the second epidemic, while severer than the first, was slower in its development. The first epidemic passed its acme two months previous to the severe heat, while the second reached its acme during the hottest month. The first epidemic decreased gradually during the latter part of hot and beginning of wet season, while the second epidemic decreased rapidly, from one hundred and thirty-seven in May to fifty-five in June. The second epidemic was increasing during the driest portion of the year.

Each epidemic began during the second third of winter, continued through the hot, dry season, to disappear during the wet season.

An additional instance of plague appearing in the hot, dry portion of the year is afforded by the second epidemic.

On reviewing a number of epidemics of plague, it is found that plague may occur in any climate; but that for any given climate, plague reappears in certain season of the year. In Manila the plague season begins in the moderately dry winter time, continues through the hot, dry season,* to end toward the latter portion of the rainy season. The remaining portion of the year is free from plague.

CLINICAL REPORT.

PENETRATING WOUNDS OF THE ABDOMEN.

BY H. L. NIETERT, M. D., of St. Louis.

SUPERINTENDENT AND SURGEON IN CHARGE OF CITY HOSPITAL, ST. LOUIS, MISSOURI.

During the past year twenty-eight wounds of the peritoneal cavity were treated at the City Hospital of St. Louis. Of this number nineteen were bullet and nine stab wounds. The nineteen bullet wounds resulted in thirteen deaths and six recoveries. The nine stab wounds resulted favorably, all having recovered. Laparotomy was made in twenty-three of the twenty-eight cases, with thirteen recoveries and ten deaths. The remaining five cases that were not operated upon consisted of three gunshot wounds and two stab wounds. The three bullet wound cases died. The two cases of stab wound recovered.

The sixteen cases of bullet wounds that were operated upon resulted in ten deaths and six recoveries. Of the sixteen cases, seven died of hemorrhage and shock, either during or immediately after the operation. The mortality of those cases surviving twenty-four hours was three deaths of those cases which were operated upon.

The seven cases of stab wounds that were operated upon, as well as the two cases not operated upon, recovered.

Our treatment of penetrating wounds of the peritoneal cavity, given in a general way, is as follows:

Firstly, a thorough and immediate preparation of case for examination and operation.

Secondly, an exploratory laparotomy.

Thirdly, repair of the injury and stopping of hemorrhage. In our resections the Murphy button has been exclusively employed.

Fourthly, in all bullet wounds perforating any portion of the gastro-intestinal tract the peritoneal cavity has been flushed with physiologic saline solution and drainage employed.

Fifthly, hot, moist, saline packs were applied twice daily and head end of bed elevated six to nine inches.

Sixthly, stimulants of physiologic saline solution were employed, both in enemata and hypodermoclysis, as indicated.

Seventhly, in wounds of the stomach and small intestines, feeding was restricted to the rectum for the first week and everything was forbidden by the mouth.

A few histories of the important cases are given below:

Case 1.—History No. 7801, patient was brought to the hospital February 19, 1902, at 4:00 P. M., with a bullet wound located in the epigastric region, one inch to the left of the median line and two inches below the xiphoid cartilage. Patient was immediately prepared for operation, which was begun three-quarters of an hour after arrival. On arrival the vomitus contained blood. The urine, obtained on catheterization, contained no blood.

Operation.—An incision four inches long was made in median line in the epigastric region. On drawing for the stomach a perforating wound was found in the anterior wall of the fundus. The wound was sutured by a double row of

sutures. The lesser cavity was entered through an opening made in the gastrocolic fold of the peritoneum and the posterior wall of the stomach examined. A large perforation was found in the posterior wall and was closed by Czerny-Lembert sutures. A large amount of blood and stomach contents was found in lesser peritoneal cavity, which was carefully mopped away by gauze sponges. From the position of the wound the direction of the bullet could easily be determined and it was evidently in the large muscles of the back. A large gauze drain was placed in the lesser peritoneal cavity and left protruding from the surgical incision. A large, hot, moist saline pack was applied to the abdomen. Patient was placed in a warm bed and stimulants administered. The stimulants resorted to were saline enemata and saline hypodermoclysis. Everything was prohibited by the mouth. The hot packs were repeated twice a day for five days. The drains were gradually removed; convalescence was uneventful.

The interesting feature of this case is that no signs of general peritonitis followed, though the lesser peritoneal cavity contained a large amount of escaped stomach contents. and irrigation was not resorted to, but merely mopping with gauze sponges.

Case 2.—History No. 7850, had a bullet wound located in left linea semilunaris, on a level with the umbilicus and penetrated into peritoneal cavity. Laparotomy was made half hour after arrival. A four-inch incision was made in the left semilunaris. The bullet perforated the mesentery and descending colon. Considerable hemorrhage had taken place from the severed mesenteric vessels. No intestinal contents could be seen. The vessels were ligated and perforations sutured. Peritoneal cavity was flushed with a physiologic saline solution and the abdomen closed, layer by layer. No drainage was employed. Dry dressing was applied to the wound. Patient was put to bed with the head elevated six inches. A hypodermoclysis was administered. Patient recovered.

Case 3.—History No. 4273, had a bullet wound in anterior axillary line on left side on a level with seventh interspace. Examination showed the seventh rib shattered, dullness on percussion over left pleural cavity. Patient was exsanguinated. Thoracotomy was done at once and the severed vessel ligated. Pleural cavity was emptied of its bloody contents with physiologic saline solution. Further examination showed that there was a hernia of the omentum through the opening in the diaphragm, made by the bullet. The hernia was reduced and diaphragm sutured. Now a laparotomy was made in the median line and the abdominal viscera carefully examined. The only perforation found was in the left lobe of the liver, from which considerable bleeding had taken place. The liver perforation was packed with gauze from the under and upper surface. Peritoneal cavity was flushed until the washings came away clear. Abdominal wound was partly closed and hot packs applied. Patient recovered.

Case 4.—History No. 7126, was brought to the hospital with a stab wound in left anterior abdominal wall, midway between the umbilicus and the anterior superior spinous process of the ilium. The wound penetrated the peritoneal cavity and a large portion of the omentum was protruding from the wound. Patient was immediately prepared for operation. A portion of the omentum, which was protruding, was carefully ligated and removed. The abdominal wound was enlarged sufficiently to permit of a careful examination of the viscera in that region. No perforation being found, the abdominal wall was closed. Patient recovered.

Case 5.—History No. 7815, was brought to the hospital with a bullet wound in the abdominal wall, two inches to the right of the left anterior superior spinous process of the ilium. Preparations were immediately made for laparotomy. A thorough examination of the bullet wound was made to determine

whether or not it had penetrated. The wound could be followed up to the transversalis muscle, where its course apparently ended. It was then thought that the bullet had not entered the peritoneal cavity, but had fallen out of the wound. The operation was discontinued and the wound closed. Two days later patient developed a frequent and thready pulse, abdomen became distended and tympanitic. Patient vomited frequently and it was evident that he was suffering from a general peritonitis. All feeding per os was abandoned. Stomach was siphoned. Patient was fed per rectum. This treatment was continued until the patient's death. Post-mortem examination showed that the bullet had penetrated and injured the small intestine and that the patient died of general peritonitis.

Case 6.—History No. 6127, had a bullet wound in the anterior axillary line, which shattered the sixth rib. Bullet passed downward, backward and to the left and was lodged under the skin in the mid axillary line of the left side on a level with the eighth rib. After immediate preparation of the patient for operation the bullet wound was thoroughly examined. It was found that there was blood in both chest cavities, indicating that the bullet had passed through both cavities. It was also found that the bullet had perforated the diaphragm. Patient's vomitus contained blood. The shattered portion of the sixth rib was resected on the right side, as was also the eighth rib on the left side. Intercostal vessels were ligated and bullet removed. A portion of the omentum presented from the perforation of the diaphragm on the left side. This was pushed back into the peritoneal cavity and the opening was closed by silk sutures.

A median incision, four inches in length, extending downward from xyphoid cartilage was made and the stomach examined. Two perforations were found in the posterior wall of the stomach, which were carefully sutured. The upper surface of the liver was furrowed by the bullet, wherefrom considerable hemorrhage was taking place. Hemorrhage was controlled by packing. Drains were placed in the lesser peritoneal cavity and external wound partly closed. The usual post-operative treatment was employed.

On the seventh day all the drains from the peritoneal cavity were removed. Abdominal wound contained pus. This continued to discharge for four weeks. At the expiration of this time the discharge was very profuse and temperature became irregular. Blood analysis revealed a negative Widal reaction, no plasmodium, but an increase in the leucocytes. A thorough examination was made at this time, under a general anesthetic, and a pocket of pus found deep in the peritoneal cavity. This was thoroughly cleansed and a drainage tube introduced.

Two months after the arrival patient developed lobar pneumonia of the right lung, which was evidently due to infection. The pneumonia terminated by abscess formation. Two inches of the seventh rib on the right side of the anterior axillary line were resected and an abscess opened, wherefrom a large amount of pus was drained. The pus contained staphylococci. Patient's temperature chart continued irregular and general condition became worse. He died one hundred and seventeen days after arrival, from a general sepsis. Post-mortem was not made, as the case was investigated by the coroner.

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EDITED BY

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OTHO F. BALL, M. D. Managing Editor.

COLLABORATORS:

MAX MICHAELIS, M. D.,
Docent of Internal Medicine, University of Berlin, Germany.

JULIUS NEUMANN, M. D.,
Docent of Obstetrics and Gynecology, University of Vienna, Austria

FRANZ NEUGEBAUER, M. D.,
Professor; Director of the Evangelical Hospital, Warsaw, Russia.

JULIUS SCHNITZLER, M. D.,
Docent of Surgery, University of Vienna, Austria; Surgeon-in-Chief, Franz Joseph Hospital, Vienna.

HEINZ WOHLGEMUTH, M. D.,
Berlin, Germany.

Address all communications to the INTERSTATE MEDICAL JOURNAL, LINMAR BLDG., ST. LOUIS, MO.

EDITORIAL COMMENT.

DR. LORENZ AND THE STATE OF ILLINOIS.

While the attitude of the State of Illinois in requiring Dr. Lorenz to take out a license may be susceptible of correct legal interpretation, we do not agree with some of our contemporaries that the action was the right one at the right time and at the right place. In spite of the fact that Dr. Lorenz remained longer in Chicago than would be necessary for a consultation, the rights accorded a consultant, and especially a foreign one, are applicable in a reasonable number of successive consultations. No one will contend that the eminent Austrian surgeon left his country and came to this country for the purpose of "practicing medicine" among its inhabitants. He came here to consult with Mr. Armour's physician, and while here has been repeatedly called in consultation in similar cases. At no time has he signified his intention to practice medicine in the United States as interpreted by our own courts or to perform operations until the number of consultations were exhausted. The legislative and executive aspects of the law frequently need to be tempered by a fair and just interpretation. Eminent physicians and surgeons of the United States have frequently visited foreign countries, and officiated both in clinics and in private cases, without having been subjected to uncalled-for legal hardships, almost amounting to breach of hospitality. By confronting Dr. Lorenz with this statute of the State of Illinois, it has kindled the flames of the ever-voracious lay press, and oiled the tongues of the ever-ubiquitous newspaper reporters. A surgeon with the international reputation and local respect that Dr. Lorenz commands did not

deserve to be placed on the defense, or subjected to what probably has been correctly termed notoriety. The fact that it would be difficult for even educated physicians to obtain licenses either in Germany or Austria, as claimed by some, should not be alone considered in the sense of foreign exclusion, but rather to the extreme difficulties encountered in meeting the requisites of German educational standards. We ought to look into the preliminary and medical education of our own graduates, to the question of reciprocity in our own states, before we glaringly confront a venerable visitor to our shores with the intricacies of our legislation. It does not require a Cicero's oration on the citizenship of Archias to elucidate the subject.

HYGIENE OF WOMAN.

There is no nobler task set before the physician than to teach mankind how to prevent disease. All the grand achievements of modern medicine culminate in prophylaxis. To utilize what we physicians have learned so far in regard to diseases and their causes, to protect the coming generations from untoward influences incidental to life, to liberate them from the clutches of degeneration and to improve the race—this it is that will make the physician, in all truth, the benefactor of mankind. The female sex, in particular, needs the greatest protection. A nation without strong women and healthy mothers cannot ascend—nay, is bound to deteriorate. The comprehension for the urgent necessity of female hygiene ought to become universal among our profession. We find pleas for protection of women and children dispersed in our medical journals and textbooks, and even the *belle literature* and the stage have taken hold of the subject. It is with the greatest appreciation that we have perused a work recently published by two French physicians, Platon and Sepet, entitled “Hygiene de la Femme,” which treats the four phases of womankind—childhood, girlhood, motherhood, and old age.

The hygiene of the child begins with her birth. The determination of the sex, in hermaphrodites, is sometimes extremely difficult, and both physician and midwife must bear in mind how momentous the correctness of their judgment is in this matter. The mastitis of the infant, though of common occurrence, demands earnest attention, since the sequels of suppuration, viz., atrophy of the breast, disfiguring scars and retracted nipples, are, in years to come, not only repugnant from an esthetic standpoint, but render the future mother unable to nurse her children. In the advice given on the subject of proper feeding, clothing, cleanliness, vaccination, etc., we constantly find as the dominating idea of the authors the truism that the child is mother to the woman, just as “the child is father to the man.”

The child grows older and enters the period of puberty. This wonderful revolution in the girl's body and mind must needs call forth the combined attention of mother, teacher and physician. This is the time of woman's life when so many physical ailments and moral deficiencies originate. In a splendidly written chapter the authors discuss all means that can make the bodies of our daughters strong and their minds healthy—from the choice of appropriate clothing to reading good books; from physical exercises, riding on horseback, swimming and automobilism to attendance at theaters, concerts and balls.

The chapter on indications and contra-indications of marriage is more than

a medical essay. It offers the widest social perspective, and the public at large will be greatly benefited by its perusal.

Woman is destined for motherhood—for motherhood by marriage. What hygienic measures does the married woman require? What are the causes of, and how to overcome, sexual frigidity? Why and how must sterility be avoided? All these and numerous other questions are treated with equal detail. The hygiene of pregnancy, parturition and the puerperium are interestingly brought before us. The section on the hygiene of the young mother is instinct with the one sentence: every woman should nurse her child. Lactation renders the woman healthier and stronger. She thus accomplishes her true duties in a strictly physiologic sense. She has borne a child, a part of her own flesh and blood; she must continue to foster it with all her thoughts and all her affection, for "the child needs its mother's love as much as her milk."

And now the third radical change in a woman's life—the menopause. The suggestions of the authors as to the hygiene of this period stand on a par with those in the foregoing chapters, and though they are but a repetition of what we have so often heard and read, they should be attentively considered by the family physicians.

Old age, at last, arrives. After the cares and trials of motherhood, after the recent and frequently severe crisis of the menopause, the hour of rest seems finally to have come. But the *role* of woman is, as yet, by no means finished. Replete with experience, her advice will be of benefit to the growing families founded by her children. Let us devote all possible care to the hygiene of the grandmother. By doing this we shall render her cheerful, shall lengthen the last days of her life, and the unavoidable end will be but the rounding out of a complete and useful life.

DEPORTATION OF CHORIONIC VILLI INTO THE MATERNAL SYSTEM.

Notable progress has been made of late in our knowledge of the histology and development of the placenta. We may assume that the presence of blood in the intervillous spaces is at present almost generally acknowledged. We can observe how, since Peters' painstaking observations have been published, the old conception of nidation of the ovum is steadily losing ground, and at present the majority of scientists are inclined to believe that the impregnated ovum attaches itself to and buries itself in the deeper layers of the decidua vera. The number of the adversaries of the theory that syncytium is a fetal and not a maternal structure is fast diminishing.

Yet our knowledge of the physiology and pathology of the placenta is by no means complete. One of the latest problems facing investigators is the fact that complete chorionic villi have been found in various parts of the body, far from the uterus.

Many observations are recorded of the presence of chorionic villi in metastatic nodules, found in vagina or lungs subsequent to hydatiform mole or to chorio-epithelioma—better known as deciduoma malignum. Especially in cases of hydatid mole a remarkable vitality of these deported villi was observed. They did not show any tendency to atrophy, but on the contrary to multiply. They developed in some instances a destructive tendency, and led to the formation of tumors of the most intense malignancy.

The separation and deportation of chorionic villi in ectopic pregnancy has been observed and described by Veit (*Zeitschrift fuer Geb. und Gyn.*, vol. xlv,

1901). Especially this latter article suggested the question whether such a deportation is not also possible in normal pregnancy. We owe to Poter the reply; it is in the affirmative.

In an elaborate paper, published in the *Archiv fuer Geb. und Gyn.*, vol. lxxvi, 1902, Poter records the results of an examination of seven pregnant uteri and concludes: Separation of complete chorionic villi or of parts of the syncytial cover of the villi and their deportation into the maternal system is possible in every stage of pregnancy; most probably it is a typical occurrence taking place in every pregnancy.

This observation at once shatters our old belief in the existence of a secure barrier between fetal and maternal blood in the normal placenta. If chorionic villi are torn off and carried away, lesions in the placental structure and free communication between the blood of the fetus and the mother are the self-evident sequelæ. Two problems prominently present themselves: What becomes of these villi, carried off into other parts of the body? What effect has this vulneration of the placenta, viz., this disturbance of its integrity?

It has been said above that in cases of chorio-epithelioma the deported villi form the nucleus of a metastasis, and that in cases of hydatid mole they may continue development and become malignant in character. As regards the deported villi in normal pregnancy, Poter is inclined to think that they disintegrate, atrophy and disappear. They have been found as emboli in the blood vessels of the lung, and Veit suggests they may in some instances be the cause of the formation of thrombosis in the pelvic veins subsequent to confinement. Poter concludes that, since this tearing off of villi is a typical occurrence in pregnancy, it has, as a rule, no pathologic effect. He believes, however, that a certain influence upon the organism may be exerted under certain conditions. He finds in this new observation a plausible explanation for some of the rather more intangible manifestations in the syphilitic state. Hitherto various unsatisfactory theories have been advanced to explain conditions such as the following: A healthy woman is impregnated by a syphilitic man; she develops no symptoms of syphilis, gives birth to a syphilitic child, but proves afterwards to be immunized against syphilis; or such a woman is afterwards impregnated by a healthy man, but gives again birth to a syphilitic child without ever having herself exhibited symptoms of syphilis. Poter offers a new explanation for these facts which is based upon the now proved existence of the deportation of chorionic villi into the maternal system in every pregnancy. His interpretation is satisfactory, and is devoid of the instability which is, as a rule, incident to theories in general.

BUFOTALINE—AN ANIMAL DIGITALINE.

In a recent communication to the *Academie des sciences* of Paris, MM. Phisalix and Bertrand described two interesting substances which they isolated from the venom of toads. The first, which they term *bufotaline*, might be called animal digitaline. It is a powerful cardiac stimulant, slows the cardiac action, and in large doses arrests the heart in systole. It is easily soluble in alcohol or chloroform, and but slightly soluble in water. The other substance, occurring with *bufotaline* in toad's venom, differs from it in affecting the nervous system rather than the heart. Its action is similar to that of curare. Injected into a cricket it produces, first, a progressive enfeeblement of the muscular apparatus, and finally complete paralysis. The heart of the paralyzed insect continues to beat actively. This substance is soluble in alcohol, not at all in chloroform, and dissolves in all proportions in water. It is not beyond the bounds of possibility that these substances may find a use in human therapeutics.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

A Study of Stagnation Icterus Consequent upon the Inflammation Accompanying Cholelithiasis.—EHRET and STOLZ (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, vol. 10, part 1 and 2, 1902).—The first case proves that chronic icterus may result from the lodgment of a stone in the cystic duct, even though there is no compression of the common duct. The operation revealed a free passage through the ductus choledochus, yet the stools were free from bile pigments before the operation and remained so for several days thereafter. The absence of bile pigments from the stool can only be explained by the fact that the large bile ducts are transmitting no bile. The bile, in this case, appeared through the fistula ten days after the operation, and eleven days afterwards in the stool.

In a second case, on the other hand, three stones from eighteen to twenty cm. in diameter, and together five and one-half cm. in length, had lodged in the ductus choledochus without producing icterus. If the obstruction alone could result in jaundice, it would certainly have occurred in this case. After removal of the stones, there occurred a marked jaundice. Both of these cases show that removal of the obstruction does not necessarily relieve the biliary retention.

The cause of the icterus lies, not in the direct obstruction by the stones, but in the obliterating cholangitis in the small ducts, which prevents the flow of the bile into the large ducts. The cholangitis is usually of microbic origin.

A Case of Perityphlitis Resembling Tubercular Peritonitis.—RUBRITUS (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, vol. 10, part 1 and 2), reports a case in which the symptoms pointed to the existence of tubercular peritonitis, while the autopsy revealed perityphlitis. There was gradual development of free fluid in the abdominal cavity for a period of six weeks, marked diarrhea, frequent vomiting, etc. After a puncture there followed an elevation of the temperature, multiple tumors developed in different parts of the abdomen, and in the epigastrium there appeared a band which was taken for the contracted omentum. Two symptoms were noted that are usually considered characteristic of tubercular peritonitis, viz.: a circumscribed tympanitic area to the right of the umbilicus and an inflammatory infiltration about the navel. The autopsy revealed a sero-purulent peritonitis and an appendix ulcerated and perforated in two places.

Alimentary Glycosuria and Laevulosuria in Diseases of the Liver.—FERRANNINI (*Centralblatt fuer Innere Medizin*, September 13, 1902).—It is well known that many diabetics can assimilate laevulose, but not grape sugar. Upon the removal of the pancreas the liver is no longer capable of converting grape sugar into glycogen, but can still care for laevulose. The latter, therefore, would be stored up in the liver, while the former would pass over *in toto* into the blood. In diseases of the liver it should be much easier and more important, at least from a diagnostic standpoint, to produce an alimentary glucosuria with laevulose than with glucose.

The author reports the results of his observations in the production of alimentary laevulosuria, and glycosuria, in all of the liver cases that came under his observation in the course of a year. There were sixteen cases, including

atrophic cirrhosis, hypertrophic cirrhosis, syphilis of the liver, carcinoma, echinococcus, etc., etc.

In fifteen cases the test for laevulose was invariably positive; in ten cases the test for glucose was positive. The latter test was negative in three cases of chronic malaria with enlargement of the liver, and in two cases of icterus in syphilites.

The author concludes that laevulosuria, more than glycosuria, shows the insufficiency of the glycogenic function of the liver, and that in diseases of the liver the test for alimentary glycosuria should be made with laevulose and not with grape sugar.

Remarks on Two Rare Intoxications.—FRIEDEBERG (*Centralblatt fuer Inner^e Medicin*, No. 42, 1902).—The first case was that of intoxication due to the fluid extract of hydrastis. The patient, who had been advised to take twenty-five drops three times daily for uterine hemorrhage, took nine grams at one dose in order to get quick results. There followed burning in the stomach, nausea, dizziness, and finally unconsciousness. The intoxication manifested itself first and chiefly in the circulatory and nervous systems, and secondly in the digestive tract.

The second is a case of poisoning due to petroleum. The patient took two swallows from a glass, thinking it was whiskey. He suffered immediately afterwards from severe burning pains in the stomach. On the following day he experienced headache, loss of appetite, diarrhea and intense weakness. His chief complaint, however, was that everything tasted and smelled of petroleum. This phenomenon continued for six days. This could not have been due, for this length of time, to any local irritation, or the action of the petroleum itself. Though the patient was not a neurasthenic, this symptom was no doubt due to auto-suggestion.

Concerning Gastric Digestion in Cases of So-called Hypertrophic Cirrhosis of the Liver with Icterus.—KIRIKOW (*St. Petersburger Medicinische Wochenschrift*, No. 36 and 37, 1902).—The results of the author's observations on the above subject are summed up as follows:

1. The supposition of Hayem that the so-called hypertrophic, icteric cirrhosis of the liver (Hanot's disease), unlike the atrophic cirrhosis, results in a hyperpeptic gastritis, is not proven.

2. One cannot determine the nature of a cirrhosis of the liver from the nature of the gastric digestion.

3. In the examination of fourteen cases, but four cases of increased acidity were noted. In several a marked decrease of the acid was found. One must conclude, therefore, that there is frequently a diminution of the digestive powers in many of these cases.

4. In such cases the lower portion of the digestive tract plays the chief digestive role, providing the motility is good.

5. The conditions and variations in the consistency of the gastric contents cannot be brought into relationship with the course of the icterus.

6. Aside from the icterus, the period, the intensity, the duration of the disease, and the general condition of the patient influence the gastric digestion.

7. Much depends upon the anatomical and functional condition of the secreting cells and their innervation.

8. The acidity in these cases may rapidly decrease—in fact, the HCl may disappear entirely; there may be anorexia, increased peristalsis and diarrhea.

9. Even in atrophy of a large portion of the gastric mucous membrane, hyperpepsia may develop as a result of the increased action of the peptic cells in the healthy portion of the mucous membrane.

10. In the advanced stages of Hanot's disease there develops frequently a secondary inflammatory condition.

11. This condition does not necessarily result in dyspeptic symptoms, but may continue normally, in spite of the hypo- or apepsia.

12. Hyperchlorhydria in hypertrophic cirrhosis of the liver with icterus does not necessarily go hand in hand with hyperpepsia.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Contribution to the Subject of the Relation of Acute Miliary Tuberculosis to Operations Upon Tubercular Nodes in the Neck.—WITTMER (*Breitraege zur Klinische Chirurgie*, Bd. 33, Heft 3).—Three cases reported from the Heidelberg Surgical Clinic furnish the author with the inspiration for this paper. The germs can be transported either by veins or lymphatic vessels. The more rapidly, of course, the larger the vessel implicated. Some authorities claim that it is necessary in case only a few germs gain access to the vessel, that the wall of the same should become primarily diseased and then the germs be carried from this point secondarily to other parts of the body. The third possibility is that no bacilli get into the vessels during the operation in cases where the disease of these vessels has existed at the time of the operation. Of course, here the final result would be the same. Of course, hemorrhage, narcosis, shock and all of these factors have their effect. The literature is said by the author to contain no other examples except the three reported by himself in which the whole system became infected in the way above mentioned. In the first two the symptoms came on immediately after the operation, while in the third, thirteen days elapsed before they manifested themselves.

Biliary Cholelithiasis.—ZALACKAS (*Le Progres Medical*, October 11, 1902).—Here are briefly reported two cases of peculiar interest. In the first stones had been discharged through a spontaneous fistula. There was at the same time evidence of the retention of bile, so the author operated and removed several stones from the common duct, with the result that the patient made a perfect recovery. The second patient presented a large abscess in the upper right side of the abdomen, and when this was lanced the knife came upon hard bodies, rightly supposed to be gall-stones. This patient also presented symptoms of retention, and at the operation which followed there were removed from the gall-bladder a large number of stones with a perfect definite result. The chief interest in these two cases lies in the fact that they presented unique and unusual symptoms of gall-stone diseases.

Plastic Closure of Defects in the Wall of the Common Bile Duct.—KEHR (*Archiv fuer Klinische Chirurgie*, Band 67, Heft 4).—As far as known to the author, such operations have never been performed except by himself. In two hundred cases he has only seen permanent fistula five times in the region mentioned. The wounds in the common duct have a most pronounced tendency to heal even though the bile which flows over and through them is infected. Healing occurs unless there be a stoppage of the duct somewhere near its outlet, and this takes place if the duct be cut in two, with exception of a narrow strip of mucous membrane on the under surface. Kehr does not sew wounds in the duct at all any more, but prefers to use the drainage tube in every case. In tying off the cystic duct in an operation, the wall of the common duct was included in the ligature, and consequently an immense hole cut in the latter structure. To

close this the author turned a flap from the wall of the stomach, and after sewing the same down packed gauze on its outer surface. This held perfectly. The subject is certainly one of interest and opens a new field.

An Anomaly in the Development of the Liver Presenting the Aspect of New Growth.—GIRARD (*Revue de Chirurgie*, No. 10, 1902).—It is claimed by the author that there is no parallel case in the literature of medicine. This patient was a child, three years of age, whose abdomen commenced to distend at the age of two. When seen there was an enlargement of the entire abdomen, great in extent and more pronounced high up. With a diagnosis of fibro-sarcoma of the liver an operation was performed, and it was found that the new growth was attached to the liver by a sort of pedicle. This was severed and the abdomen closed without accident. However, the infant died thirty hours after this procedure with febrile symptoms. The autopsy showed all of the organs to be normal, and, in reality, failed to explain the cause of death. In the new growth were found a large number of germs which the author failed to identify, and it is supposed that their development favored by the unusual conditions present led to the febrile cause of death. A long description of the microscopical appearance of the growth is given, and it must be said that it differs from any known tumor. A large number of embryonic cells were present and parts of the tumor certainly led one to think of an interference with the development of the organ and the later hyperplasia of certain cell forms.

A Further Report Upon the Treatment of Tic Douloureux by Division of the Sensory Root of the Gasserian Ganglion.—CHAS. H. FRAZIER and WM. G. SPILLER (*Philadelphia Medical Journal*, October 25, 1902).—This article has as its chief point for consideration the report of the present condition of the patient in whom Dr. Frazier did his operation one year ago. No recurrence of pain has been noted, hence the author regards this as a definite cure, and urges it in support of his method. In reasoning to the point that his method is superior to removal of the ganglion, the author lays stress on the fact that he avoids hemorrhage from the cavernous sinus. However, the reviewer suggests that the authorities who have most experience in this line consider as of little importance the complications just mentioned. Frazier regards the hemorrhage which accompanies the elevation of the ganglion from its base as a matter of grave import. However, it must be said that others have been much more troubled by bleeding from the middle meningeal artery and from the dura mater than they have from this first mentioned source, while the author almost disregards these two latter factors. It would seem that Dr. Frazier has before him a most difficult task in convincing the majority of surgeons that it is much easier or much less dangerous to divide the sensory root than it is to remove the ganglion, since a good deal of the hard work involved in freeing ganglion must be done before the root can be divided.

The Surgery of Metastatic Abscesses in the Kidney.—JAFFE (*Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie*, Band 9, Heft 4 and 5).—Sufficient weight has not been laid upon the fact that there is a very benign form of abscess in the kidney which is in many instances the proper subject of surgical treatment. These tend to break through into the fat capsule of the organ, but should be by all means operated upon. Such an abscess may break through into the pelvis of the kidney in a manner which is usually not considered of much importance, but one which may actually give rise to very grave complications. This also should be prevented by early operation upon the abscess cavity. It is a very difficult matter for pus to burrow from the kidney clear through to the skin of the loin, but this may be the only means of spontaneous cure in some

cases unless early operation has been done. The whole matter is very simple, however, after the decided focus be incised while still limited to the kidney. In the author's cases the abscesses were all on one side and in no instances multiple, at least this was true early or at the time of operation. In no case was communication at the pelvis of the kidney found. His patients ran a typical septic fever, course, pain was in the loin and the kidney was sensitive especially when felt from in front. The organ was also decidedly enlarged. The author reports five cases, one of which died after the removal of the abscessed organ. The other four recovered, an incision alone being made in these cases. The author recommends, in consequence, that such abscesses be merely opened and packed with gauze.

The Treatment of Hydatid Cysts.—LLOBET (*Archives Provinciales de Chirurgie*, October, 1902).—A sharp distinction is made between the treatment of cysts which have suppurated and those which have not. The latter class should be treated with buried sutures, and thus our author thinks the idea of a cure is accomplished. He has never lost a single case thus treated, which is certainly the best test. The suppurating cysts he sews up to the wall of the abdomen and drains. Of course this latter method greatly prolongs the period of convalescence, but it is nevertheless to be preferred to the idea of injecting germicidal fluids into the cavity. The obliteration of a cyst cavity depends more upon its situation in the liver than upon its size. The superficial one is rapidly obliterated by the pressure of the surrounding organs, while the deep one cannot readily collapse and must granulate until it is full. Two important complications are suppuration and the escape of bile into the cyst. The author gives a lengthy description of his technique, which consists principally in puncturing or incising the tumor and thus relaxing the tension to its wall so that the latter can be easily peeled out or sewn to the abdominal wall as may seem desirable. A table of all the cases on record is appended, and one may be surprised to know that one-hundred and one have been treated with drainage, thirteen by the author's method of intraparietal sutures, and twelve by other methods.

Contribution to the Surgery of Cleft Palate.—FERGUSON (*Annals of Surgery*, October, 1902).—The operative procedure advised in this article is intended to benefit those cases especially in which the palate is oblique and extending into only one nostril. Just before the anesthetic is commenced atropine is given to decrease the secretions of the mouth and pharynx. Chloroform is to be given by the spray method and the patient held in the Rose position, cocaine having been applied to all mucous membranes which can be reached. The flap is raised from the septum of the nose and the contiguous portion of the hard palate, and this is pulled down into the mouth. Then from the other side a flap is raised commencing at an incision along the alveolar margin; this is turned up into the nose and when the raw surfaces of these two flaps are approximated the mucous membrane of the lesser flap looks toward the nose while that of the first flap faces the cavity of the mouth. These are sewn together and in one case, which is detailed, a perfect result was obtained. It is said that the nasal twang so common after these operations can be entirely perfected by the patient learning German or French and forgetting English. Then upon relearning English the objectionable sounds fail to reappear.

Intracapsular Resection of the Prostate, the Normal Proceedure.—Rydygier (*Centralblatt fuer Chirurgie*, No. 41, 1902).—The author does not wish to complicate the post-operative treatment by opening the prostatic urethra, or to cause more than the slight danger to the patient coincident upon the operation recommended above. Hence he will no longer practice enucleation of the organ, cap-

sule and all. He cuts straight to the posterior wall of the prostate, as Ferguson and Murphy of our own country do, using his retractors, etc., in their well-known way. In closing he compares this operation and its results very aptly to the enucleation of a struma, concluding that the cicatricial contraction in both cases tends equally to keep the respective tubes open, though they have been compressed before.

Late Nervous Complications in Fracture of the Lower Extremity of the Humerus.—NOUCHET (*Gazette des Hopitaux*, October 7, 1902).—Special reference is made to the paralysis which appears years after the fracture in childhood. The patient was nine years of age when the arm was broken, and eleven years after, while in the military services, he began to notice paralysis in the regions supplied by the ulnar nerve. In explaining this, the author reasons that on account of incomplete fracture just above the external condyle, the nutrition of the same is impaired, with the result that the bone develops longer on its inner than on its outer aspect, and in consequence there occurs a pathological cubitus valgus. He has found that the normal angle is about one hundred and seventy-two degrees, being somewhat greater in men than in women, while in the patients affected in the way now under discussion the angle is reduced to one hundred and fifty degrees. While this change is taking place the channel for the ulnar nerve is partially effaced, with the result that the pressure upon the nerve produces the paralysis referred to and the prognosis in these cases is extremely bad. The author has operated upon two cases and relates but slight improvement in one, while there was none at all in the other; still he advises that in such patients an attempt should be made to deepen the canal in which the nerve lies.

Decortication of the Lungs in Chronic Empyema.—KURPYJNWEIT (*Beitraege zur Klinische Chirurgie*, Bd. 33, Heft 3).—C. Awler, of New York, is given credit by the author as being the one to invent this operation. He was the first to perform it on the living, being at the time in ignorance of the work of Delorme on the cadaver. Our author has collected the histories of fifty-six cases in which this operation has been performed by various surgeons. Delorme considers that it is necessary as preliminary treatment to wash out the cavity carefully for several days before the operation is undertaken. As soon as the chest is open, the granulations are to be scraped off. The diaphragm and the pericardium are to be left untouched. After the thickened pleura has been cut it can usually be stripped off with considerable ease. The pulmonary fistula should be sewn up, else air may accumulate in the pleura from the bronchus. Some surgeons have contented themselves with merely incising the thick pleura, and have found that the lung expands sufficiently after such an operation. Delorme claims that good results are accomplished in from 30 per cent. to 40 per cent. of the cases. There is no doubt that in many instances the operation is of wonderful benefit to the patient.

Subperitoneal Resection of a Pouch in the Urachus.—PAUCHET (*Bulletins et Memoires de la Societe de Chirurgie de Paris*, No. 26, Tome 28).—The patient was a boy five years of age in whom a fistula at the umbilicus was discovered shortly after birth. The escape of fluid was intermittent and had always occurred at intervals of four or five days. This fact was explained at the operation by the finding of a pouch in the course of the patent urachus in which the fluid of course accumulated. There was no evidence of cystitis; hence, an operation was undertaken. Without opening the peritoneum it was possible to resect almost the entire urachus, about the middle of which was found the pouch referred to, shrunken to the size of a hickory nut. Such cases are not especially rare, as is evinced by the fact that fifty-six are on record up to 1899. The patient may be

a few years old before the trouble makes its appearance, and it is well to operate early, else cystitis, with all its undesirable features, may complicate the picture.

Excision of the Gasserian Ganglion, with Report of Ten Cases Operated Upon by the Hartly-Krause Method.—MURPHY and NEFF (*Journal of the American Medical Association*, vol. xxxix, Nos. 15 and 16).—The authors take up in a comprehensive manner the anatomy, pathology, etiology, symptomatology, etc., involved and the history of the operative procedures adopted for the remedying of this intolerable condition. The disease in the form which demands the surgeon's attention is found in people over forty, and gives a very bad prognosis unless operative measures be resorted to. A few cases were not entirely cured even after removal of the ganglion; still in these it was never proven that the structure had been entirely removed. Murphy has deviated from the original technique of the operation, with a result that he gets easier access to the ganglion. Where trouble with the middle meningeal is experienced, he considers the ligation of the external carotid the "legitimate" means of controlling the same. He considers that the high bone opening usually made necessitates the needless injuring of the temporal lobe in elevating the same. An unnecessarily large number of cases have been drained, thus exposing the patients to the danger of sepsis. In ten cases the authors had three deaths, and found in the forty-two cases collected from the literature that the mortality was fifteen per cent.

Splenectomy and the Talma Operation in Banti's Disease.—TANSINI (*Archiv fuer Klinische Chirurgie*, Band 67, Heft 4).—One cannot consider that the removal of the spleen has accomplished much in removing the liver symptoms in this condition. However, the author has produced decided benefit in the way indicated by the title of this paper. He has operated, however, upon but one such case, which he reports. He considers that in removing the spleen he takes away the source of poison production, and by doing the Talma operation he restores the normal circulatory conditions. He found at the operation thirteen quarts of fluid in his patient's abdomen, and about four weeks later he punctured it and removed three and one-half quarts. There has been no reaccumulation since that time. The patient is now in first-class condition.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

Citrophen—A Contribution to the Study of Its Therapeutic Properties.—ALFRED LEFEBRE (*These de Paris*, 1901, No. 653; *Bul. gen. de Therapeutique*, 1902, No. 11).—The dose of citrophen for adults is from one to three grams daily; for children, not over one gram daily in doses of one-fifth gram each. As it is but slightly soluble in water it cannot be prescribed in solution, and is best given either in capsules or in powders which are to be dissolved, before taking, in a little seltzer water or lemonade, in both of which it is readily soluble.

The drug has a very agreeable taste, which makes it doubly useful in pediatric practice. It is very rapidly absorbed by the intestine; twenty minutes after its administration it can be detected in the urine by means of the general test for salicylates, a few drops of ferric chloride solution turning the urine a Burgundy red.

Its therapeutic value depends upon its antirheumatic, analgesic and antither-

mic properties. In rheumatism it acts like the salicylates, although it sometimes fails to produce the desired effect where sodium salicylate effects a cure. It does not, however, produce tinnitus aurium, and even in excessive doses is well borne by the stomach. Albuminuria, hematuria, cutaneous eruptions have never been observed. Citrophen is particularly efficacious in subacute rheumatism.

Its chief drawback is the profuse and often disagreeable sweating which it produces. However, since these sweats are not accompanied by a corresponding cardiac depression, they may be considered useful rather than injurious. Moreover, they do not always occur. It is a powerful analgesic and as an antipyretic may be employed with benefit in nearly all febrile affections.

On the Antagonistic Action of Chlorides and Bromides in Epilepsy.—M. LAUFER (*These de Paris*, 1901, No. 281; *Bul. gen. de Therapeutique*, 1902, No. 11).—According to Richet and Ed. Toulouse, the organism when deprived as far as possible of its chlorides becomes thereby more sensitive to the action of bromides. The physiologic rationale of this method is that by depriving the cells of the body of one of their normal articles of nutriment we cause them, in their effort to find a substitute, to absorb more actively some medicament.

From the beginning this method has shown an increase in the activity of bromides under the influence of a diminished salt supply, or as the French term it, of hypochloruration. Moreover, it is with a strict milk diet that the bromides show their greatest activity.

The process of hypochloruration is quite free from danger, for as little as five grams of salt suffice to fulfill all the vital functions. The diet is best made to consist of three litres of milk containing one gram of salt each and a pound of ordinary bread containing two and one-half grams of salt. This gives us five and one-half grams daily, which is quite within the limits of safety. Under this regimen considerable of the administered bromide is retained in the tissues, replacing there some of the chloride.

Accordingly, in epilepsy the dietary plays an important part and should on no account be neglected.

Conversely, salt drives the bromides out of the tissues, replacing them in the cells and this hastens its elimination. Accordingly, when we pass from a milk diet to a mixed one, the dose of bromides should at least be doubled. The ordinary full diet contains fifteen grams of salt, and this drives out of the organism quite twice this amount of sodium bromide. On the other hand, on passing from a mixed to a milk diet the dose of bromides should be decreased by half.

The Medical Treatment of Appendicitis.—BOURGET (*Die Heilkunde*, 1902, p. 413).—The writer claims not to have had a single death from appendicitis in the last ten years. He ascribes this to his method of treatment, which consists in cataplasms and irrigation of the bowel with water and oil. Operative interference he considers indicated only in the interval after a number of attacks, never during the attack itself. He considers the usual treatment by means of ice and opium responsible for the great increase in the number and severity of cases of appendicitis throughout the civilized world. "It is difficult to imagine," he writes, "a worse treatment; it is indeed just this mode of treatment that best serves the cause of the surgeon, rendering necessary and almost inevitable sooner or later his armed intervention." It is interesting and amusing to find at this date a writer of prominence who has the courage of his convictions and is willing to defend the old theory of a typhlitis stercoralis and its treatment by means of purgatives. It is not to be expected that his views will find many adherents.

Calomel in Pediatrics.—S. SCHOEN-LADNIEWSKI (*Jahrb. f. Kinderheilk.*, vol. 56, No. 2; *Centralbl. f. d. ges. Therapie*, 1902, No. 9).—The author formulates

the conditions under which calomel, first introduced in the treatment of diseases of children by Trousseau, should be used. As a gastro-intestinal disinfectant, especially in cases of colic due to flatulence, it is more efficient than any other drug. It has an equally beneficent action in beginning dyspepsia with belching and gray stools, in acute febrile gastritis, in subacute and chronic gastro-intestinal catarrh, in cholera infantum. It is almost a specific in the so-called eclampsia ex indigestione. In catarrhal icterus of children the writer uses calomel exclusively. The child has hardly taken a few doses when the icterus begins to fade, the nausea and ructus cease, and in five days at the most the child is well. The writer warns earnestly against giving calomel to children as a purgative, but has found it to act well as a diuretic, especially in cases of hydrops due to scarlatinal nephritis.

Doses of 0.005 to 0.02 (grain one-twelfth to grain one-third), according to the child's age, given every hour or two, always suffice as a gastro-intestinal disinfectant. Larger doses, 0.02 to 0.05, given three times daily for four days, must be administered if we desire a diuretic effect; after discontinuing the drug for four days, we may begin again to give it. Calomel is best given as a powder mixed with sugar; as it is somewhat unstable it should always be put up freshly. With toothless children we do not need to fear ptyalism, but older ones should be given a chlorate of potash mouth-wash and taught to take care of their teeth.

Borax in the Treatment of Obesity.—C. GERHARD (*Ther. d. Gegenwart; Centralbl. f. d. ges. Therapie*, 1902, No. 9).—It is often desirable to administer some drug as an adjuvant to the diet in reducing fat. Accordingly, Gerhard has tried sodium biborate in a number of cases with encouraging results. Physiological experiments have shown that in animals and man borax taken regularly interferes with the proper assimilation of food. The result of observation made on three patients may be summarized as follows: The three individuals were not very favorable subjects for successful treatment. Two of them had a hereditary tendency to obesity, the third has injured his system by means of excessive alcoholism and was suspected of beginning contracted kidney. Corresponding to the unfavorable nature of the material, the results were not very striking. In the first case, after a treatment of thirty-four days, a loss of fifteen pounds was produced; in the second case only a moderate reduction was observed; the third, treated for some twelve weeks, lost thirteen pounds. The addition of a fat reducing diet would doubtless have greatly increased the loss of weight, but in that case it would not have been possible to judge what part was played by the borax. A dose of 0.25 three times daily produces little or no effect; one grain three times daily produces unpleasant gastro-intestinal disturbance. The proper dose seems to be 0.5 three times daily.

The Therapeutic Value and the Mode of Action of Venesection in Uremia.—WALKO (*Centralbl. f. d. ges. Therapie*, 1902, No. 7; *Zeitschr. f. Heilk.*).—The writer reports eleven cases, from Professor v. Jaksch's clinic, in which the withdrawal of 500 to 900 c. c. of blood followed by salt water infusion produced an exceedingly favorable effect upon the uremic attack. Just how the beneficial action of venesection in this case is produced is not yet clear. The theory that by its means a certain amount of the poison responsible for the uremic attack is removed from the system has, according to Walko, no real basis. Nor can the change of blood pressure or of the osmotic pressure of the blood be held responsible, for neither is profoundly modified by so slight a bleeding. According to Walko, the poisons circulating in the blood in uremia irritate the vaso-motor center in the brain, thereby producing a tonic spasm of the arterioles, particularly in the kidneys. As a result the renal circulation is slowed and the diuresis lessened. A considerable withdrawal of blood by means of venesection lessens

this vascular spasm and in this manner produces its favorable results. Hot baths are still a favorable mode of treating uremia. Leube, however, showed some years ago that diaphoresis may have an unfavorable effect on the uremic attack, indeed may even produce one, if diuresis is not also increased. Sweating, to be sure, causes a loss of water, but since practically none of the solid constituents of the blood are excreted by the skin, the poisonous substances in uremic blood are thereby only concentrated. Hypodermoclysis following venesection produces its most strikingly favorable results in cases of uremia due to acute nephritis.

The Following Prescriptions Have Been Found Useful for Intestinal Antisepsis:

1. **R** Carbon. depurat 0.3
 Pancreatini 0.1
 Benzonaphtoli 0.5
 M. D. tal. dos. No. xii.
 S. One powder every three hours.
2. **R** Argent. colloid 0.3
 Sacch. lactis 3.0
 Glycerini,
 Aq. dest. aa. q. s.
 M. f. pil. No. xxx.
 S. Two pills three times daily before meals.
3. **R** Resorcin. resublim.,
 Bismuth. salicyl aa. 5.0
 Sod. sulphat.,
 Pulv. rad. rhei aa. 10.0
 Sacch. lactis 15.0
 M. **S.** Take as much as will go on the tip of a knife, three times daily.
4. **R** Calc. carbon. precip 0.5
 Bismuth. subgall 0.2
 M. f. p. D. tal. dos. No. xii.
 S. One powder every three hours.
5. **R** Mentholi 1.0
 Tr. cort. aurant 10.0
 M. **S.** Fifteen drops three times daily after meals.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

Eosinophilia in Filiaris.—WILLIAM J. CALVERT, M. D., U. S. Army. (*The Johns Hopkins Hospital Bulletin*, June, 1902).—The writer noted a large retro-peritoneal tumor during the course of an autopsy on a native Filipino dead of plague. The mass was semi-translucent, soft and made up of a number of sacs containing fluid. The sacs did not freely communicate. The fluid on microscopical examination revealed nothing of note. The right inguinal and iliac glands were enlarged. Pieces of the several organs fixed in Zenker's fluid showed numerous eosinophilic leucocytes in the capillaries. In lymph vessels in the areolar tissue about one of the iliac lymphatic glands, sections of an adult filaria were found. The tissues immediately surrounding the lymph vessels were infiltrated with numerous eosinophiles. No traces of trichinosis were ob-

served. The presence of a worm surrounded by eosinophiles, some of which were observed passing through the involved lymphatic gland to the general circulation, eosinophiles in the various organs, and an absence of an increase of eosinophiles in plague, considered in the light of the recent literature on the blood in parasitic disease, led Calvert to think that eosinophilia was associated with filiarisis. A study of specimens of blood from four hundred and twenty-six cases demonstrated positive findings in two cases. Later a fourth case was found, and a fifth case reported in Manila, which, however, was not examined. Systematic hourly blood counts and blood examinations were made in these cases. All of the cases showed a decided eosinophilia associated with filiarisis. These facts led to the conclusion that in the early stages of filiarisis, leucocytosis, with an increase of the eosinophiles may be looked for, and that as the disease progresses, the leucocytosis and increase in eosinophiles gradually decrease to normal.

Bad Rice and Beri-Beri.—SURGEON SEMBILAN (*The Sei-I-Kwai Medical Journal*, August 31, 1902).—Sembilan reports to the Japanese government that very probably beri-beri is increased through the consumption of certain uncleansed parts of rice. The disease is steadily increasing among the Malays for that reason. During the period when the natives were compelled to use their own grain, hulling and washing it themselves, the poisonous parts of rice were removed effectually and the disease was held in abeyance. At the present time imported rice is cheaper than that raised by the natives themselves, so very little of the home article is consumed. This cheaper imported article is not well cleaned. Beri-beri is constantly on the increase. Beri-beri causes more than two-fifths of all deaths among Chinese; the actual mortality due to it is ninety-seven for every ten thousand—nearly one per cent.

A Case of Chronic Lymphatic Leucemia, with Lymphosarcoma of the Sternum and Ribs.—CHARLES F. CRAIG (*Medical News*, October 4, 1902).—The patient was a private in the 14th Infantry, admitted to the Presidio Army Hospital in September, 1901. He gave a history of several attacks of diarrhea two years before, lasting once nine months. His present illness began with cramps in the abdomen. He was anemic, with pale mucosæ. Enlarged spleen was present, with general glandular enlargement. Blood examination at first showed nothing but a leucocytosis. In October, marked dyspnea developed, with febrile phenomena and death. The increase in the leucocytes was confined mainly to the lymphocytes. The greatest number of lymphocytes found was 336,000 to the cubic mm. At this time the red blood corpuscles numbered 1,352,000. The ratio of the polymorphonuclear leucocytes to the small lymphocytes was, as a rule, about one to 1,200; the ratio of the eosinophiles to the small lymphocytes about one in 2,200.

Autopsy.—Covering the sternum and ribs, and lying between them, on both sides of the chest, was a large amount of newly formed tissue resembling cartilage in appearance. The ribs and sternum were obliterated. This material covered the pericardium and projected in small nodular masses into the pleural cavity. The mesenteric glands were enlarged. Liver was pale and not enlarged. Spleen was $18 \times 10 \frac{1}{2}$ cm. It showed minute hemorrhages beneath the fibrous capsule, which was thickened. The organ was congested. The cortical markings in the kidneys were indistinct. Stripping of the capsule disclosed numerous small petechial hemorrhages.

Anatomical Diagnosis.—Chronic lymphatic leucemia; acute parenchymatous nephritis and pleurisy with effusion.

Microscopic Diagnosis.—Sections of the liver showed a diffuse distribution of small lymphocytes through the capillaries.

The excessive accumulation of lymphocytes produced lymphomata in places.

The spleen was crowded with leucocytes, most of them being lymphocytes. The Malpighian corpuscles were greatly enlarged and composed entirely of small lymphocytes, the condition in place really being lymphomatous. The kidney showed collections of lymphocytes in the intertubular capillaries. Many lymphomata were observed. Sections of the lymphatic glands showed enormous collections of small lymphocytes, the entire glandular tissue being composed of them.

The tumor affecting the ribs and sternum was cartilaginous when cut with the knife. Sections of the tumor showed a delicate fibrillated reticulum enclosing in its meshes numerous cells, large numbers of which resembled small lymphocytes.

Small pieces were seen detached, in the sections, which showed the normal structure of bone. The histological structure of the tumor is best described simply as a reticulated connective tissue framework enclosing large blood spaces and numerous cells resembling the small lymphocytes.

Conclusions.—This was a case of chronic lymphatic leucemia, complicated by diffuse lymphatic infiltration of the sternum and ribs. Different writers name this condition differently. Some call it lymphosarcoma. Other names are angiosarcoma and lymphadema ossium. Klebs, Hektoen and others call it myeloma.

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Diseases as Indications for Artificial Interruption of Pregnancy.—A. PINARD (*Annales de Gyn. et d'Obstetr.*, September, 1902).—After briefly surveying the history of artificial interruption of pregnancy in France, the author gives *in extenso* his personal opinion on this question, and corroborates his standpoint by citing numerous observations of his own and those recorded in literature. He begins with arguing the religious and legal side of the problem. The physician must be conceded the right of saving the patient's life by interrupting pregnancy, even without her consent, because very often, especially in all toxic conditions, she is in a state of disturbed consciousness. As regards diseases which may necessitate interference in an existing pregnancy, Pinard distinguishes between those which are produced by the pregnancy itself (such as hydramnios, hemorrhages, hyperemesis, albuminuria, eclampsia, etc.) and those which are aggravated by the pregnancy (such as diseases of the respiratory, circulatory or urinary systems). In cases of uterine hemorrhages he advises interruption of pregnancy if the pulse rate is constantly above 100. In pulmonary tuberculosis he treats the disease and watches the pregnancy. In kidney lesions the decision rests with the general impression of the patient, granted that the quantity of urine voided in twenty-four hours does not decrease to less than 800 ccm. Pulse and respiration form the criteria in heart lesions. Artificial abortion in the first half of the pregnancy has yielded more satisfactory results than interference during the latter half. Twenty-two thousand seven hundred and eight women have been delivered in Pinard's clinic between 1890 and 1900. Of these, in only twenty cases was interruption of pregnancy deemed necessary on account of internal diseases, the cases of contracted pelvis being excluded from these statistics. In fifteen of these twenty cases the results attained were satisfactory.

Delivery Complicated by Ovarian Tumors.—M. SEMON (*Monatsschr. fuer Geb. und Gyn.*, September, 1902).—The author gives a clear *expose* of this subject,

and suggests the following way of dealing with this condition: Any effort to terminate labor by means of forceps, cranioclast or version in order to overcome the obstruction must be considered bad practice. The maternal mortality from peritonitis, rupture of the uterus, rupture of cysts, etc., has been found in this procedure to be fifty per cent. and higher. The obstruction can be removed by (a) reposition; (b) puncture or incision per vaginam; (c) ovariectomy during labor. Reposition implies, in cystic tumors, the danger of rupture; incision the possibility of infection. After reposition there has been observed, both in cystic and solid tumors, twisting of the pedicle and necrosis subsequent to confinement. Ovariectomy during labor offers the best chances to mother and child; it is the only rational treatment. Ovariectomy may be performed either through the vagina or abdominal wall, according to the conditions found. The question which has not been settled is, whether the fetus should be removed by means of a cesarean section, or its expulsion should be left to the natural forces after ovariectomy has been performed. The writer advocates the latter practice. While statistics compiled by McKerron show a mortality of fully eighty per cent. in ten cases in which cesarean section was performed under these conditions, the author finds that in seven cases in which the treatment as regards terminating the delivery has been entirely expectative, the mortality is *nil*.

In the author's case the obstruction was caused by a sarcomatous tumor of the right ovary of the size of a child's head. Ovariectomy was performed, and shortly after the operation a full-term living child was born spontaneously in foot presentation. Lying-in period was uneventful. Two years later patient was delivered of another healthy child.

A Case in Which Pregnancy Occurred After the Menopause.—REGINALD H. HANN (*Jl. of Obstet. Brit. Emp.*, September, 1902).—Menstruation ceased when the woman was forty-six years of age. All sexual feeling was lost. Three years later she gave birth to her thirteenth child, a healthy male. After weaning her baby, when a few months old, the menses returned, the flow lasting one day only, and was accompanied by severe pain recurring every four weeks. Sexual desire reappeared with the first period.

Diagnostic Value of Contractions in Tumors of the Female Internal Generative Organs.—CATURANI (*Arch. Ital. di Gin.*, June, 1902; rev. *Jl. of Obst. Brit. Emp.*, September, 1902).—The writer describes a tumor which resembled in size and shape a five-months' pregnant uterus. By the bimanual examination the uterus was found lying to the front, and it seemed as if it moved with the tumor and was attached to it. During palpation it was distinctly noticed that the tumor became tense, firm and rigid. The diagnosis of multiple fibroids was made. At the operation the tumor was found to be a cyst of the left ovary with a twisted pedicle, adherent to the intestines and the posterior wall of the uterus.

In another case, in which the same contractile character was noticed, on operation a suppurating cyst of the broad ligament was met with.

The author, therefore, concludes that contractility during palpation may be found in (1) the pregnant uterus; (2) the pregnant tube; (3) the tube with inflammatory or fluid contents; (4) a uterus containing a submucous fibroid; (5) the interstitial and subserous fibroid, and (6) some cysts. Its value as an aid in differential diagnosis is not so great as has been hitherto supposed.

Partial Contractions of the Pregnant Uterus Simulating Myomas.—F. AHLFELD (*Zeitschr. fuer Geb. und Gyn.*, vol. xlvii, part 2, 1902).—The writer describes the following case: Patient, forty-one years old, multipara, apparently in the last month of pregnancy, somewhat anemic from several hemorrhages which had oc-

curred of late. Abdominal wall exceedingly thin. Below the umbilicus an oblong tumor, eight cm. in length can be distinctly felt, apparently belonging to the uterine substance. Its consistency is markedly tenser than that of the adjoining uterine wall. To the left of this tumor another area of firmer consistency, about the size of the palm of the hand, is found. It is flat and not protruding like the first mentioned tumor. Diagnosis of fibromyoma was made.

A few days afterwards labor began with severe hemorrhages, due to a placenta previa. Patient died. At the post-mortem it was ascertained that there were no myomas in the uterus, and the fact was proven that the tumor and hard resistance felt were caused by a partial contraction of the uterus. This phenomenon was known to exist in the early stages of pregnancy, but so far has not been described near the normal end.

Typhoid Fever During Pregnancy—Widal's Reaction in Mother and Child.—SANTI (*Boll. del Soc. Tosc. di Ost. e Gin.*; rev. *Jl. Obst. Brit. Emp.*, September, 1902).—The patient, a woman aged twenty-four, IIIpara, took sick with typhoid fever in the beginning of November, being the eighth month of her pregnancy. Widal's test was positive. The fever and diarrhea disappeared November 20th, and the patient gradually improved. During the whole course of the illness the fetal heart could be easily heard. She was delivered of a healthy child, 2700 grams of weight, December 24th. The blood of the child gave Widal's reaction. A dilution of one-sixtieth of maternal blood produced marked agglutination of the bacilli, but in a dilution of one-twentieth of the blood of the baby the bacilli retained their motility. The writer does not believe that the fetus actually contracted typhoid fever, or Eberth's bacilli passed into the blood of the fetus, but thinks that only the substances produced in the maternal blood which have the agglutinating power had entered the fetal circulation.

The Passage of Agglutinin From Mother to Fetus in Typhoid Fever.—A. ROUS-LACROIX (*La Presse Medic.*, April 2, 1902; rev. *Phila. Med. Jl.*, August 30, 1902).—The author divides the cases in which the fetus is born during an attack of typhoid fever into those in which the fetus is infected during pregnancy and contains typhoid bacilli; those in which the toxin is transmitted through the placenta, the fetal blood giving the Widal reaction; and those in which the fetus escapes all infection. He reports the case of twins, almost at term, the mother dying of typhoid fever. Labor occurred on the eleventh day of the disease. Widal reaction was not obtained from the blood of the infants before or after death. The mother's blood gave a positive reaction. Another case in which an eight-months' child was expelled on the thirteenth day of illness recovered. While the blood of the mother, the placenta and umbilical vein gave positive Widal reaction, that of the fetus was negative. When miscarriage occurs late in the infection, agglutinin will probably have passed to the fetus. The agglutinin seems to be stopped in the liver of the fetus before becoming diffused throughout the organism.

Typhoid Infection of the Uterus.—LARTIGAU (23d Proceedings of the New York Pathological Society; rev. *Centralbl. fuer Innere Med.*, 1902, No. 14).—During an attack of typhoid fever in a female patient, an extrauterine pregnancy was diagnosed and removed by operation. Patient died a few days later. Typhoid bacilli and streptococci were found in the endometrium which showed the histological signs of endometritis.

In another fatal case of typhoid infection in a girl, a hemorrhagic endometritis was found and the presence of typhoid bacilli ascertained in the endometrium.

Typhoid Bacilli in the Fallopian Tube.—JOS. KOCH (*Monatsschr. fuer Geb. und Gyn.*, August, 1902).—The author found typhoid bacilli in the muco-purulent contents of the right fallopian tube of a patient who took suddenly sick with the symptoms of an acute salpingitis. She had typhoid fever twelve years ago. The author discusses the possible ways of infection: (1) from the peritoneal cavity by way of the abdominal end of the tube; (2) from the uterine cavity; (3) by means of blood infection, and (4) through the lymphatic vessels. The author is inclined to accept for his case the theory of an infection from the uterine cavity, because there was another saprophytic bacterium cultivated besides the typhoid bacillus.

Infection of an Echinococcus of the Liver by Typhoid Bacilli.—K. HUEHN and M. JOANOVIC (rev. *Centralbl. fuer Innere Med.*, 1902, No. 13).—Patient took sick with typhoid fever middle of December, 1900. End of March, 1901, attack of severe pain in the abdomen, with icterus. Laparotomy was performed June 19th. A suppurated echinococcus cyst was found. From the pus the typhoid bacillus, streptococcus, and staphylococci were cultivated. It is the first case of this kind known in literature.

Suppuration of a Dermoid Cyst of the Ovary Caused by Infection with the Typhoid Bacillus.—E. JONAS (*Med. Bull. of Washington University*, 1902, No. 1).—Patient was thirty-eight years old. She had typhoid fever in September, 1900. She was admitted to the hospital May, 1901. Pulse, 120 to 150; temperature, 102° to 104°. A large cystic tumor was found in the right half of the abdomen, probably originating from the right ovary. Abdomen was tympanitic and extremely sensitive to pressure. Diagnosis of probable twisted ovarian cyst with infection was made. At the operation extirpation of the tumor was found to be impossible and incision and drainage decided upon. The cyst contained pus, sebaceous masses and hair. Patient made a complete recovery. Bacteriological examination of the contents revealed a pure infection with the typhoid bacillus. This is the sixth case of this kind reported in literature.

Infection of Ovarian Cysts During Typhoid Fever; Report of Two Cases.—M. J. LEWIS and R. G. LE CONTE (*Am. Jour. of Med. Science*, October, 1902).

CASE 1.—Five weeks before admission patient was delivered of a full term child. She was then sick with fever and confined to bed for three weeks. On admission temperature was 104°; pulse, 120. Diagnosis of puerperal sepsis was made. A Widal reaction proved positive three days later. For the next three weeks the patient presented symptoms of a moderately severe case of typhoid fever. During the fourth week the character of temperature changed and it began to assume a hectic type. A vaginal examination revealed a large fluctuating mass in Douglas' cul-de-sac. Vaginal incision was made and a quart of greenish fetid pus, with many cheesy particles, evacuated. The diagnosis of suppurating teratomatous cyst was assured. The pus showed the typhoid bacillus in pure culture. Following the operation the patient had a relapse of the typhoid fever but recovered finally completely. Several months later the cyst was removed through an abdominal incision.

CASE 2.—The typhoid infection ran a normal course, when on the thirty-sixth day the temperature suddenly rose. On the twenty-fourth day of the relapse patient felt acute pain in the epigastrium and rectum. An examination revealed bulging in Douglas' cul-de-sac. Sense of fluctuation was conveyed to the left lower quadrant of the abdomen. An ovarian cyst of the left side was removed through abdominal incision. Patient made a perfect recovery. Cultures made from the pus of the cyst gave typhoid bacilli.

The writers cite seven other cases from literature.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Proper Methods of Handling Cow's Milk as the Chief Factor in Successful Artificial Infant Feeding.—PALMER (*Chicago Clinic*, September, 1902) says that the degrees of modification of cow's milk, the minute percentages generally regarded as essential, are not as important as the consideration of the amount of filth the dairyman has permitted to invade the milk. "It is to the dairyman and not to the scientific milk modifier that we must look for the future of infant feeding."

The author then describes the methods in use at Clover Farm, an Illinois dairy.

The cattle is all healthy stock, tuberculin tested by the state authorities, the herd at present being almost altogether Holstein. Sick cows are at once separated from the herd, and the barns used by them are never occupied by healthy stock. The only water used is artesian well water. Cows are groomed regularly, and the udders are washed twice daily. The food used is ensilage, to which bran, shorts and gluten are added. In summer, pasturage under very careful supervision is allowed.

The milking is done at 3 A. M. and 3 P. M., in stables with cement floors that can be scrubbed.

The udder washers precede the milkers, who are compelled to be absolutely clean. They use buckets covered with a cap holding in place two thicknesses of sterile gauze, with absorbent cotton between. The first milk drawn from each udder is put aside. The milk reaches the separators within five minutes after the milking. The excess of cream or milk which must be taken out to guarantee the standard of 4 per cent. is removed, and the rest again mixed. It is now run into the cooler, cooled to 45° F., and then poured into bottles and sealed. The entire process does not take over ten to twelve minutes. The bottles are shipped to the city packed in shaved ice. All articles used about the dairy are sterilized daily. It has been found possible to ship the milk from Illinois to Europe without deterioration.

Malignant Diphtheria.—MARFAN (*Rev. Mens. des Mal. de l'Enf.*, October, 1902) reviews the cases of malignant diphtheria under observation at the Hospital des Enfants-Malades during 1901 and 1902. There were one hundred and forty-three cases of this class, ninety-one of which terminated fatally, 61 per cent. In all there were one thousand three hundred and three cases of diphtheria with a mortality of 20.7 per cent.

The symptom complex of the fatal malignant cases may be summarized as follows: Anginal phase, severe angina with formation of heavy, thick, fetid membrane, confluent over tonsils, pillars of fauces and vault of pharynx, with great swelling and some ulceration of the subjacent parts; a coryza with sero-hemorrhagic discharge; marked glandular swelling, and peri-glandular edema. The temperature is not greatly elevated, pulse rapid and feeble, marked prostration, and nervous depression. Constant albuminuria. Under the influence of the antitoxin the throat clears slowly, but incompletely, without improvement of all the general symptoms.

About the fourteenth or sixteenth day the second phase sets in, called by Marfan the cachectic phase. This is characterized by great and progressive pallor, marked apathy often amounting to stupor, often accompanied by paralysis of the soft palate, progressive weakness of the pulse, increase in the size of the liver which marks the extreme cardiac dilatation, and finally the vomiting which precedes death.

Post-mortem examination of a series of cases showed marked cardiac dilatation with myocardial degeneration. Cardiac thrombosis (not pre-agonal) in many cases. At the point of adhesion of the thrombi, evidences of endocarditis were not infrequently found.

The degree and the constancy of these cardiac lesions appear to the author as proof of their importance in determining the fatal issue in these cases, though they are not always responsible for death.

The liver showed extreme passive congestion, the kidneys both inflammatory and degenerative changes.

Except in the cases where there was direct extension of the diphtheritic process to the bronchi, or a secondary broncho-pneumonia, the lungs showed merely congestion.

Emboli in various organs were found at times.

Bearing in mind the great efficacy of antitoxin in non-malignant diphtheria, the author has set himself to the task of explaining its comparative inefficacy in these cases. Bacteriological examinations which he had instituted proved the almost invariable presence of a mixed infection. Some of the cases appeared to be an unquestionable streptococcic infection. But Deguy and Legros were able to cultivate in many of the cases a bacterium which did not grow well in any culture media, unless hemoglobin were added.

The germ appeared as a small, non-capsulated, *motile* diplococcus, staining positively by Gram. Animal inoculations showed it to be very virulent, mice and guinea-pigs succumbing promptly to a septicemia induced by it. The authors call this germ the diplococcus hemophilus perlucidus, and believe that it belongs in the general class of the streptococci.

Whether this germ can produce its effects, except in conjunction with the Klebs-Loeffler, remains to be proved.

Marfan explains the lack of action of the antitoxin in these cases by presuming that the serum is antidotal only to the Klebs-Loeffler, but is without effect on the germs producing the secondary meta-diphtheritic affections.

For the treatment of these cases large doses of antitoxin, frequently repeated, were given, though Marfan emphasizes the fact that early administration is of more importance than size of dose.

In addition, stimulating treatment is used throughout. By this treatment some of the malignant cases were saved. It seems that this secondary infection only occurred in those cases in which the toxemia was not neutralized by the antitoxin; in other words, that the streptococcic late infection could only occur in a system overwhelmed with the diphtheria toxemia. In view of this fact, he thinks that the antitoxin should be administered in all suspicious cases as soon as possible, without waiting for bacteriological confirmation of the diagnosis of diphtheria.

Diphtheria, with Reference to the Use of Antitoxin.—KERLEY (*Archives of Pediatrics*, October, 1902), lays down the following rules:

1. With a visible membrane, *inject at once* and take a culture.
2. In croup, inject if there is inspiratory and expiratory obstruction.
3. Patients should be seen at twelve-hour intervals.
4. Reinject in twelve hours, unless there be marked improvement.
5. Unless improvement is continuous, reinject at twelve-hour intervals until membrane disappears.
6. Dosage: two thousand units to a child under one year, amount to be repeated if necessary; to a child over one year, three thousand units under same conditions.

[This paper was read before the American Pediatric Society in May, 1902. In the discussion that followed, the principles suggested were in the main advocated as being correct.—Ed.]

A New Sign of Pleural Effusion in Children.—KELLEY (*Archives of Pediatrics*, October, 1902) says that in the course of symptoms which indicate the early stage of pleurisy, among which is the attitude of lying upon one side, or pressing on one side, this position changes, and the patient instinctively turns and prefers to lie upon the back or be propped up high in bed. The child avoids bending toward that side or pressing upon it. This is a sign of effusion, of considerable bulk, and poured out rather rapidly. Where the effusion *has lasted for a long time* the patient may prefer to lie on the affected side, because a tolerance of the pressure of the fluid has been established. The explanation of the phenomenon offered is that lying upon the back or sitting up causes the least possible pressure of the effusion against the compressed lung and the heart and great vessels, thus allowing greatest freedom of breathing and circulation.

Renal Decapsulation in a Child.—CAILLE (*Archives of Pediatrics*, October, 1902), reports a case of a five-year-old child who had an acute nephritis after an attack of measles at the age of two. There was apparent recovery, but during the next three years she had several other attacks. Before operation the child was generally edematous, heart markedly enlarged, urine showed albumen and hyaline and granular casts. Renal decapsulation was performed on both kidneys, which at the time of operation were found to be in a state of chronic parenchymatous inflammation.

Three months after operation the child though distinctly improved, was not well.

The author thinks that the proposition to treat Bright's disease surgically should be met without prejudice, seeing the uselessness of the medical treatment. He suggests inspection of the kidneys through lumbar incision, in which cases of acute nephritis (not secondary to heart lesions) do not clear up in a reasonable time, and would advise decapsulation of both kidneys should they appear swollen and enlarged.

Medical Treatment of Tuberculous Peritonitis.—COMBY (*Arch. de Med. des Enf.*, October, 1902) reports several cases, both of the ascitic and of the dry form of tuberculous peritonitis, in which medical treatment brought about complete cure. The measures used were absolute rest in bed, flat on the back, and abundance of fresh air (whenever possible patients were kept in the fresh air continuously).

Alimentation, with fats and proteids, was pushed to the extreme limits of the digestive powers. As adjuvants cod-liver oil, either pure or with creosote, glycerophosphate of lime, and lecithin were given, with inunctions of creosote, etc.

Whenever possible, as soon as the condition of patients permitted, they were sent to the seashore or the country.

The author believes that laparotomy is only indicated in the encysted or suppurative forms of tuberculous peritonitis. In no other form does laparotomy offer any better chance of recovery than the simple plan of treatment outlined above, and laparotomy entails additional risk to the patient.

ORTHOPEDICS.

IN CHARGE OF

MALVERN B. CLOPTON, M. D.

Resection of Five Inches of Tibia—Complete Reformation of Bone.—MARTIN and LEBEUF (*New Orleans Med. and Surg. Jour.*, September, 1902).—On account of an accident five inches of tibia were removed, leaving only a narrow strip of periosteum behind. In three months' time there had been an almost complete replacement of the removed bone, and calcification seemed complete.

The Correction of Deformities Following Osteitis of the Knee.—WISNER R. TOWNSEND (*N. Y. State Jour. of Med.*, September, 1902).—While ninety-five per cent. of tubercular joint disease of the knee are cured with motion and little deformity, when the modern protective plan of treatment is followed there however remain those cases not correctly treated which heal with either subluxation of the tibia or other deformities. For subluxation the genu-clast of Goldthwait gives the best means for forcible correction. Flexion, knock-knee, bow-legs, etc., must be forcibly corrected manually, or, if this is not possible, it is better to do a linear or cuneiform osteotomy, reserving excision for those cases where subluxation is extreme, or right-angle deformity is present. Osteotomy, either linear or cuneiform of either the femur or tibia, has the advantage of not going through tissue previously diseased, where some foci may remain, of not being as extensive an operation as excision, and of not disturbing the epiphyseal cartilage or interfering with the growth of the limb, and in children of not being followed by relapses, as is excision. Several cases are reported.

Excision of the Knee for Chronic Rheumatism.—THEO. A. MCGRAW (*Hot Springs Med. Jour.*, September 15, 1902).—Chronic rheumatism of one knee, which has for two or three years lost its function, and has resisted all forms of treatment, is offered the only hope of relief of pain and a serviceable leg by the excision of the joint. The breaking up of adhesions under an anesthetic, and the subsequent massage and passive motion have, in the author's hands, only aggravated the symptoms. The inconvenience of a stiff leg is the only drawback, but this is not great in a one-sided affection; in a double knee involvement resection of both knees is not recommended, but the wheel-chair existence of the individual had better be continued.

Three cases of satisfactory operative intervention are reported. One of these is a true rheumatic, partial ankylosis of one knee in a girl of twenty-two. The second case was rheumatoid in character, ligaments thick, joint eroded, and much new bone tissue in the joint. The third case was one of a motile, but very painful joint which was only slightly ankylosed. Many other joints in the body were affected. The results of the operation were firm in all cases and the pain entirely relieved.

Metatarsalgia—Utilization of the X-ray for the Determination of the Therapy.—G. BILHAUT (*Annals de Chirurgie et Orthopedie*, October, 1901).—He finds that the spreading of the anterior arch or changes in the joint are not always present. Morton thought that pain was due to the pressure of the fourth metatarsal on the nerve. Recent authors have shown that the end of the bone is the seat of an osteitis. In his experience both of these explanations are correct, but besides he has found in some cases that the head of the third metatarsal falls below its neighbor, and its under surface is the seat of an exostosis. The treatment in

mild cases is rest and immobilization in plaster, in the more severe cases excision of the head of the metatarsal. The X-ray is used to determine the condition of the bones.

Relief of the Paralyzed Quadriceps Femoris by the Flexors of the Lower Leg.—KRAUSE (*Deutsche Med. Wochenschr.*, No. 7 and 8, 1902).—An excellent result has been obtained in a case of poliomyelitis, with paralysis of the quadriceps, by the transplantation into paletta of the flexors of the leg. The biceps, semitendinosus, semimembranosus and gracilis and sartorius are well divided, and then tendons introduced into a canal made between the femur and the atrophied quadriceps. The biceps was put external to the bone, and the rest of the group internally, after which they were attached directly to the paletta. The functional result was excellent, and the patient walks without a limp.

Hallux Varus.—G. LEICHMANN (*Zeitschrift f. Ortho. Chir.*, X Band, 1 Heft, 1902).—This deformity can be acquired as well as congenital. If acquired it is usually associated with flat foot or hammer-toe. It is not common, only a few cases appearing in literature. Three new cases are reported. In the first case the phalanx was bent, its distal end looking inwards. In the second case the phalanx articulates with an inverted end of the metatarsal. In the third case the toe on the right foot only was affected, was very broad, and there was a supernumerary digit fused with it. Osteotomy of the phalanges was practiced in the first case; exarticulate was used in the second case. The third case was not operated.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

A Case of Arsenical Paralysis.—J. KRON (*Neurolog. Centralbl.*, No. 20, 1902).—A case of severe arsenical neuritis in a girl twenty-one years old, who had taken pills containing arsenic for the relief of headache. These pills had been given to her by a physician. The symptoms of arsenical poisoning developed in the patient without the usual prodromal gastro-intestinal trouble. The symptoms relating to the nervous system developed with remarkable rapidity in the following order: Paresthesia, pain, paralysis and atrophy. The muscles of the upper extremities were not affected, but the lower extremities were paretic to such an extent that walking and standing were quite impossible. The muscles of the lower and upper legs were atrophic. Patellar and Achilles tendon reflexes were abolished. An unusual feature of the case, and one to which the author calls especial attention, was the involvement of the sphincteric function of the bladder. For a number of months the patient had absolutely no control over micturition and had to be catheterized. It was formerly supposed that the characteristic difference between a neuritis and a cord affection was that in the former the bladder control was retained while in the latter it was lost. This was formerly considered an important differential diagnostic point between neuritis and myelitis. This case seems to prove the contrary, or rather it invalidates the usefulness of this differentiating sign. The patient finally recovered. The prognosis of arsenical paralysis is generally good. In one hundred and thirty cases Alexander could find only three in whom the paralysis did not finally disappear. There have been not a few cases of arsenical neuritis reported, which were caused by moderate doses of Fowler's solution or other arsenical preparations. In this case, however, the dose was so greatly in excess of the average, that it was not surprising that symptoms of intoxication followed.

Pseudo-Epilepsies and the Relief of Some Forms by Thyroid.—W. BROWNING (*Jour. Nerv. and Ment. Dis.*, October, 1902).—Four cases are here described under the above title, which is used by the author in a somewhat provisional sense to specify a class of cases that cannot conveniently be brought under any other head. The thyroid treatment was used with marked success in some of them. The author's conclusions are as follows: 1. In the young there occurs a class of cases characterized by recurrent attacks of heterogenous type, and that may conveniently be called pseudo-epilepsy. 2. This form of trouble is curable. 3. Such cases, as far as here studied, are due to or associated with disturbances in the general tissue metabolism of the body. 4. Some of these are in whole or in part of rachitic origin. 5. Troubles of this kind, when due to rachitis, are amenable to thyroid treatment. 6. True epilepsy is not remedied by thyroid, even in a person who was once rachitic. 7. It is evident that in many cases there is a relation between rachitis and athyreosis than has heretofore been recognized. There must be a relative inadequacy of the thyroid function in these cases, associated with rickets. Either, as one of my cases indicates, there is a serious impairment of the activity of the gland or thyroid feeding serves to burn up harmful material at large in the system.

Remarks on the Pathological Anatomy of Syphilis of the Central Nervous System.—WILLIAM ERB (*Deutsche Zeitschrift fuer Nervenheilkunde*, Band 22, Heft. 1 and 2, 1902).—Erb may be regarded as one of the discoverers of the importance of syphilis in the subsequent development of symptoms of the nervous system. In this very interesting and readable article he discusses certain phases of the question, suggests certain problems that arise, and answers them as far as he can. Syphilitic symptoms referring to the nervous system are found in all stages of infection, but especially in the late period between five and fifteen years after the initial lesion. The first question which Erb brings up is, what can pathological anatomy teach us in regard to the manifold symptomatology of nervous syphilis? The mass of certain and definite data on the subject is relatively small. After a careful and critical study of the most recent work of others together with his own, the author notes the following as the positive facts at our disposal: There is nothing absolutely known concerning the changes in the nervous system during the primary and secondary stages of syphilis, although very often clinical symptoms, on the part of the nervous system, appear in these stages. The theory is that various irritative processes take place, perhaps in the form of serous exudates or diffuse infiltrations, which, as a rule, are again absorbed, leaving only in rare instances a thickening of the tissues. (Connective tissue, perivascular, etc.) In the later stages, during which it is supposed that the syphilitic virus has changed its nature and is no longer infectious, many pathological changes are known. Some of these are regarded as absolutely specific, such as gumma, small-celled new growths, granuloma, small-celled infiltration, gummatous nodules. In addition to them there is a vascular affection, which is of great importance, such as arteritis, phlebitis, endo- meso- and periarteritis. The absolute characteristic of such lesions in regard to their syphilitic origin, in the sense that they are specific lesions, is no longer believed to be true. There is no syphilis bacillus known, and no absolute and characteristic cell and tissue change, and no definite staining reaction. Virchow's dictum is still true that we are not in a position to decide absolutely whether any given new growth is to be regarded as gummatous or not. It is frequently impossible to distinguish between syphilitic and tubercular processes. In the light of all this uncertainty Erb asks how did the relationship between syphilis and the pathological appearances commonly attributed to syphilis come about? It is evident that it is based purely on clinical evidences, both in regard to the history of syphilis and to the effect of antiluetic therapy. Such a method of proof is of doubtful value for these reasons: First, there are many cases of so-called clinical

or anatomically grounded syphilis, where no history of syphilitic infection can be obtained; second, there are a number of processes which show the identical histological changes that syphilis does; third, that it has never been shown either that Hg. and iodine act favorably only on syphilitic lesions, nor that they always act favorably on them. Another way to approach the subject is to assume that there are certain forms of atrophy and degeneration of the central nervous system which arise from a primary affection of the nerve cell, the so-called primary parenchymatous degeneration, accompanied sometimes with glia overgrowth, such as chronic myelitis, sclerosis, column degeneration and nuclear atrophy. Clinically such conditions are very likely specific in origin, anatomically they are coming to be regarded more and more as such. To illustrate this theory, Erb describes groups of cases under the following heads: First, cases with typical gummatous meningitis, myelitis, arteritis, which at the same time show system or focal degeneration of a non-specific character, in which a history of syphilis is certain. Second, cases with typical primary system degeneration, together with changes in the meninges, cord and vessels, of doubtless specific origin. To this class belong cases of tabes, with the classic posterior sclerosis, and at the same time specific changes in the meninges, blood vessels, etc. Third, cases where there is no doubt of a syphilitic infection, in which are found primary sclerosis, system degeneration, nerve and nuclear atrophy. The following general conclusions end the article, the key-note of which is that there exists a primary cell process of syphilitic origin, which shows anatomically no definite syphilitic characteristics, but is rarely found, except in specific individuals: 1. In many cases (almost without exception in individuals with a past history of syphilis) there is found in addition to the typical luetic disease of the central nervous system (gummatous inflammation, infiltration, etc.), a primary degeneration and atrophy, which are not typically specific, but for the existence of which no other etiology can be found. 2. In many cases of such primary, apparently non-typical specific degeneration are found typical specific processes complicating them, such as meningitis, gumma, arteritis, etc. 3. There are numerous primary non-specific scleroses, system degeneration, etc., which are not accompanied by specific lesions. These occur only in individuals who have been specifically infected, or in such great numbers of them that there can be no doubt that syphilis is the primary origin of the process.

GENITO-URINARY SURGERY.

IN CHARGE OF

H. McC. JOHNSON, M. D.

Indurations and Fibrous Tumors of the Cavernous Bodies of the Penis.—TRILLAT (*Gazette des Hopitaux*, September 20, 1902).—Induration of the cavernous bodies of the penis has been variously described since 1743, Ricord's classification being accepted in his time without protest. If we consider the number of published cases, the affection is rare; but when we take into account that in general the condition causes little discomfort to the patient, and usually passes unnoticed by the doctor, we must think it occurs more frequently. We have two distinct groups—those which come in the wake of a well-established local cause, and those which appear spontaneously. In the first category are those of inflammatory, syphilitic and traumatic origin. Under the second head are those having for a cause arthritism (gout, diabetes, rheumatism); those with a general cause other than arthritism; and those with no known cause, either local or general.

They may be either single or multiple, as many as eight having been observed in a single case. Besides the evident objective symptoms there are functional difficulties, such as troubled or weak erection, pain, bending of the organ, impediment to ejaculation, diminished ability or complete loss of power of coition.

These tumors have, in general, no tendency to spontaneous cure. Malignant degeneration has never been observed, neither has osseous transformation been established. The prognosis as to life is good, but the nodosities are either a long time disappearing or, as in most of the cases, never disappear.

After considering the pathological anatomy, the pathogenesis and diagnosis, the author takes up the treatment, which consists of the usual local expedients; such as emollients, resorbents, electrolysis and excision; and the constitutional treatment, which is of service in the syphilitic condition and the diatheses.

Grafts and Transplantations of the Testicle; Application to the Treatment of Testicular Ectopy.—MANCLAIRE (*Ann. des Mal. des organ. Genito-Urin.*, September, 1902).—Having reviewed the experiences in grafting or transplanting the testicle reported by physiologists, and those of surgeons who have operated for pathological conditions in man, in all of which the graft was made after section of the cord, the author attempted to graft the testicle by approach; that is to say, he transposed it and grafted it upon its fellow without severing its cord. This, formed of tissue of the same nature, would favor the transplantation and the nutrition of the grafted organ. In the case of ectopy, this operation would remedy the displacement of the organ and its partial atrophy. The operation for graft by approach of ectopied testicle complicated with hernia comprises the following steps: Radical cure of the hernia; liberation of the adhesions of the cord; complete removal of the septum between the two scrotal sacs; opening of the vaginal of the healthy testicle; freshening of a lozenge-shaped surface of the albuginea upon both testicles; suture of the freshened surfaces to each other; envelopment of the united testicles by suture of the vaginal, utilizing the serous membrane of the hernial sac, and thus making a single vaginal tunic for the united organs; suture of the deep tissues around the cord to fix it; suture of the skin.

This operation was attempted upon a child of ten years of age, but as the ectopied testicle did not have sufficient pedicle to permit of its being drawn into the scrotum, the healthy testicle was made to approach it at the external ring, with the hope that later both would descend into the scrotum. This had not occurred nine months afterwards, and the operator expected to sever the cord of the ectopied testicle to permit it.

Eight other cases, three upon adults and five upon children, are reported. The immediate results are good, the combined testicles remaining in the single scrotal sac, not being painful or tender and not atrophying.

The vascular alterations that we find in connection with an ectopied testicle are perhaps primitive, and can possibly be one of the causes of arrest of descent. More than half of the cases of ectopied testicle which have either descended spontaneously or been artificially fixed in the scrotum, have remained smaller than normal. This justifies the operation of grafting that the author proposes, which gives many chances for the gland to return to its normal volume and to preserve its normal secretions, especially its internal secretion, so all-important to the mental, intellectual and physical being of the subject. Testicular grafting after severing the cord has given very contradictory results.

The Successful Treatment of Gonorrhea and All Inflammatory Diseases of the Urethra by Packing it with an Antiseptic Oiled Dressing.—RUCKER (*J. A. M. A.*, October 11, 1902).—Finding the injection, irrigation and internal treatment of

gonorrhea unsatisfactory, the author has devised the following technique: After the patient empties his bladder completely, the urethra is irrigated with a hot solution of potassic permanganate, about one to three thousand. The packer which he has had constructed is then introduced into the urethra as far as the inflammation extends, and through it the urethra is lightly packed with one inch continuous gauze strips, or loosely spun cotton cord, saturated with one of the following solutions:

R	Iodoform	gr. xcv
	Balsam of Peru	$\frac{3}{4}$ iv
	Castor oil	q. s. ad. $\frac{3}{4}$ iv

Rub iodoform in castor oil, then add balsam of Peru. Or:

R	Ichthyol,	
	Resorcin,	aa gr. xl
	Balsam of Peru	$\frac{3}{4}$ iv
	Castor oil	q. s. ad. $\frac{3}{4}$ iv
M	Ft. sol.	

The patient is now instructed to go as long as he possibly can before urinating, when the cord is slowly removed. It is necessary to pack the urethra ordinarily once, but in some cases twice a day until the discharge ceases, then every other day for ten days or two weeks. Four cases with favorable results are reported.

All cases of gonorrhea, whether acute or chronic, yield promptly to this treatment. The discharge ceases in from two to five days, and in ten days or two weeks more the patient is dismissed as cured. The antiseptic oiled dressing renders the field unfavorable for germ development and promotes healing of the inflamed mucous membrane.

Fatty Degeneration of the Bladder as a Factor in the Pathology of Genito-Urinary Disease in Middle and Advanced Life.—LYDSTON (*J. Cut. and Genito-Urin. Dis.*, October, 1902).—Fatty degeneration of the prostate and bladder is a condition not generally recognized. That it is an important factor in genito-urinary pathology the author is convinced from the observation of several distinct cases, a report of which he gives. This fatty degeneration of the bladder muscle is by no means limited to patients who are free from prostatic obstruction. It may be associated with prostatic disease. It constitutes one of the causes of the failure of radical operations, of whatever kind. It is wise, in the face of such degenerative conditions, not to claim too much for any radical operation upon the prostate in cases of obstructive disease. From the enthusiasm with which some surgeons are booming various operations upon the prostate, one would infer that the morbid anatomy of vesical and prostatic disease had been revolutionized for the express benefit of operators by one or another radical method.

Contribution to the Diagnosis of Renal Calculus.—BIERHOFF (*Medical News*, October 11, 1902).—The method employed is as follows: A good sized ureteral catheter is passed up into the renal pelvis, and through this tepid, sterilized one per cent. boric acid solution is gently injected until the patient complains of a sensation of pressure in the renal region, usually about 30 c.c. being required. The fluid is then allowed to flow off, and the maneuver is repeated until 250 to 300 c.c. in all have been employed. Its intention is to repeatedly distend the renal pelvis with some bland, sterile fluid, and by this means to bring about movement of the calculus. Where a stone was present, in those cases in which it was applied, the procedure was followed within twenty-four hours by a distinct hematuria. Where no stone was present there was no hematuria. The author has employed the method in five instances upon four cases of pyelitis

suspected to be due to calculus, a report of which in detail is given. This preliminary communication is intended simply as an observation.

Clinical Study of a New Silver Salt in the Treatment of Gonorrhea.—CHRISTIAN (*Medical Record*, September 27, 1902).—As a result of the study of forty-eight cases of gonorrhea in which the author used silver vitelline, he is convinced that it is the best silver compound ever offered to the profession for the treatment of gonorrhea, because: (1) It is absolutely free from any irritating properties, solutions as high as five per cent. causing no discomfort. (2) The gonococci on and beneath the urethral mucous membrane are rapidly destroyed. (3) The amount of urethral discharge is in a majority of cases at once lessened in a marked degree. (4) The actual duration of the disease is shorter than is obtained by the use of any other silver salt. In his cases thirty-eight were cured in from two to four weeks.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Lupus Erythematosus; a Clinical Study of Seventy-One Cases.—JAMES H. SEQUEIRA, M. D., London, and H. BALEAN, M. B., London (*British Journal of Dermatology*, October, 1902).—The inflammatory nature of the lesions in lupus erythematosus and their symmetrical distribution suggest a circulating poison or poisons. The hypothesis that the circulating toxine is of tuberculous origin in all cases does not appear to be adequate. The authors found that the two varieties of the disease exhibited striking differences in their relationship to tuberculosis. The discoid form was associated with tuberculosis in eighteen per cent., and there was a history of tuberculosis in the family in about forty per cent. They are, therefore, inclined to agree with W. Pick's statement that we have no right to say that lupus erythematosus discoides is a tuberculous affection.

On the other hand, they found that the disseminated form was associated with the presence of tuberculous disease in seventy per cent. of their patients, and there was a history of tuberculosis in the family in eighty per cent. The more severe forms of the disease appear to be constantly associated with tuberculosis, although in their fatal case the lesion was obsolete and limited in extent. There is, therefore, strong evidence in favor of lupus erythematosus disseminatus being of tuberculous origin, or that the presence of tuberculosis modifies the course of the disease and intensifies it. The fact that lupus erythematosus is very rarely seen in great consumption hospitals is, perhaps, not sufficiently recognized. If the disease were solely due to the circulation of toxins of tuberculous origin, it ought certainly to be frequently found in institutions where so large a number of patients suffering from tuberculous disease come under observation. The presence of albumin in the urine in a large proportion of the disseminated cases, and particularly in those in which the disease was active, may be explained in two ways. It is known that circulating toxins in the exanthemata and other diseases are excreted by the kidneys, and that they commonly set up nephritis. In the more active forms of lupus erythematosus—in those, in fact, in which it may be assumed that there is a greater toxicity—they found albuminuria, which they believed to be of toxic origin. The other explanation is that the kidneys being previously diseased, prevent the excretion of toxins, in themselves incapable of causing renal changes, and that their retention in the blood is the cause of the more active form of the cutaneous disease.

The writers incline to the former opinion, as they found no reason in some of their cases to suppose that there had been pre-existing albuminuria, and, moreover, the albuminuria was associated with the disseminated form of the disease, especially of the exanthematic type.

The situation of the lesions appeared to be determined by (1) nervous influence. The peculiar limitations of the areas affected afford strong support to the angio-neurotic theory of the disease. There were found no characteristic changes in the nervous system in their fatal case. (2) A feeble circulation also seems to be a factor, as shown by the frequent association of acroasphyxia and allied conditions, including Raynaud's disease, as in a case cited of Dr. Pringle's. (3) Local irritation cannot be overlooked as a determining factor, as shown by the appearance of the lesions after the application of poultices, of a cantharides blister, from the irritation produced by the chemical rays of light, and by the bite of a mosquito.

Malformations of the Teeth and Maxillæ in Hereditary Syphilis.—A. BRUNET (*Gazette des Hopitaux*, No. 20, 1902).—The many works and observations of Magitot and Prof. Fournier have thrown some definite light upon this subject. Contrary to the theory of Parrot, syphilis is not the only cause of these malformations; in fact, the malformations or erosions of the teeth are the common lesions which may be produced by the simple affections of nutrition, or any condition which may perturb nutrition or development. Madame Sollier, in her inaugural thesis, based on one hundred observations, has observed that idiots and those of arrested development present the stigmata usually ascribed to the influence of hereditary syphilis. There are certain lesions of this character upon which the writer places more stress, as they occur most frequently in known heredo-syphilitics and infrequently in other affections. The erosion of the first large molar, especially the inferior, is of all the teeth the most frequently affected in hereditary syphilis; the reason for this being that it is the only tooth of the second dentition in which ossification commences *in utero*.

In Hutchinson's teeth, the superior median incisors, ossification commences the first month after birth, therefore their erosion is to be considered one of the best symptoms of presumptive hereditary syphilis. The arched palate and other deformities of the maxilla are symptoms merely of degeneracy and not of any value in the diagnosis of heredo-syphilis.

Primary Infectious Purpuras and the Secondary Purpuras.—M. HIRTZ (*Gazette des Hopitaux*, No. 17, 1902).—Several varieties of the infectious forms of purpura have been described. In the form foudroyante of Henock, a disease of young infants, it begins with an intense fever, and on the first or second day the body is covered with ecchymoses and purpuric spots accompanied by bulla which often became gangrenous. The patient is plunged into coma or more or less delirium and dies in five days.

In the acute typhoidal type the temperature rapidly attains 40°, C., with headache, constipation, nausea and vomiting, the latter being alimentary or bilious. In three or four days the hemorrhages appear and are more or less confluent, accompanied by epistaxis and hematuria. Sometimes purulent conditions of the joints supervene. Apoplectic attacks occur if the hemorrhages invade the nerve centers. The temperature curve is irregular. There is pronounced albuminuria. The evolution of this form is always rapid. The subacute form is less intense in all its symptoms.

The pathology of infectious purpura is certainly interesting, but unfortunately is not as yet understood; the paludian infection has been invoked; Matthieu, in 1883, and the writer, in 1897, have cited cases of purpura in which there was paludism; but it is impossible to make malaria the direct cause of purpura.*

* The writer forgets that emboli of the protozoa in the vessels of the skin could cause the purpura.—Ed.

For Hayem purpura is the expression of a toxemia analogous to that produced by the injection of the serum of one animal into the vessels of one of another species.

Streptococci, staphylococci, pneumococci, the colon-bacillus and other organisms have, respectively, been found at autopsy. There is a secondary infectious purpura complicating variola, cerebro-spinal meningitis, typhus, acute jaundice and the grave variety, and other infectious diseases.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

On Direct Endoscopy of the Upper Air Passages and Esophagus.—G. KILLIAN (*British Medical Journal*, August 30, 1902).—Remarkable progress has been made during the last few years in the diagnosis and treatment of foreign bodies in the upper air passages and esophagus. Entirely new methods of examining these passages have been evolved and many difficulties overcome. Direct methods allow us to penetrate in a straight line into the air passages and esophagus without injuring these organs.

In the case of foreign bodies in the esophagus, the older methods of diagnosis cannot be relied upon. Even the Roentgen-gram fails, owing to the shadow of the vertebral column or heart. Direct esophagoscopy is the only absolutely reliable method. By these means the gullet may be systematically searched from above downwards, and all conditions recognized, and allow us to make an attempt at extraction under strict supervision of the eye. Local anesthesia with cocaine is all that is usually necessary. The author removed a hard rubber dental plate from the esophagus (which was fixed at a depth of 35 cm.) with the galvanocautery snare, first cutting it in two and then removing the pieces.

The same principle has been applied to the trachea and bronchi. In the case of children, direct laryngoscopy (Kierstein's autoscopia) can always be successfully employed, especially after administering an anesthetic. The writer, however, prefers to employ direct upper tracheoscopy, using a straight tube of sufficient length and width, small enough to get through the rima glottidis, being thus entirely independent of any disturbing reflex action of the pharynx or larynx. In adults a twenty-five per cent. alcoholic sol. of cocaine, with a hypodermic injection of morphine to quiet the patient, will suffice, but in children chloroform will be necessary. The head hangs backward over the edge of a table and the instruments are introduced under the guidance of the eye, looking cautiously through the tube. Foreign bodies are thus easily discovered and extracted. If just beyond the bifurcation of the trachea, upper direct tracheoscopy is all that is necessary for diagnosis and extraction. If deeper down the author employs tubes of greater length, which he introduces into the cocainized bronchi. The bronchus may be pressed into the median line and brought in a straight line with the trachea. The whole bronchial tree can be searched. Long, slender forceps and hooks are used to remove the foreign bodies.

Bronchioscopy has been employed in twenty cases; of these eleven were the author's cases. Nearly one-half of all the cases were children, their ages ranging from two to twelve years. Extraction was attempted in fifteen cases with success in thirteen. The other two were failures. The one owing to the lack of suitable instruments, and in the other the foreign body lay in an abscess cavity with a narrow opening; both cases died.

The histories of five cases are given in detail, in which the author successfully removed foreign bodies from the bronchi, and also cites a case in which von Schroetter removed a piece of lead from the right bronchus of the second order in a boy aged twelve, and a fish bone removed from the left bronchus of a boy aged three and one-half years by J. A. Killian.

Why do Nasal Polypi Recur?—HAZECK (*Wiener Med. Presse*, No. 10, 1902) answers the question as follows:

1. Because, as a rule, not all the polypi are removed or they are not removed with their pedicles.
2. Because an empyema of one or more of the accessory cavities are overlooked, which furnishes the inflammatory cause for the development of the polypi.
3. Because the bone and the periosteum from which the polypi take their origin are diseased, and they are not as a rule thoroughly removed, hence the polypi recur.

Intratracheal Medication.—FORSYTH (*Buffalo Medical Journal*, October, 1902) dates this form of medication to the year 1838, when Horace Green, of New York, passed a small sponge saturated with a solution of nitrate of silver through the glottis into the trachea. From October, 1854, to February, 1856, Green treated one hundred and six cases, of which seventy-one were cases of tuberculosis. Of the tubercular cases thirty-two were considered advanced and thirty-nine early. Of the advanced twenty-five were improved, seven were not improved. Of the thirty-nine early cases twelve had apparently recovered, five nearly well, seventeen greatly improved, three moderately benefited and three not improved at all when the report was made. Green later professed a growing faith in the procedure, not only in tuberculosis, but also in bronchial affections and asthma. The advantages of this form of medication over the usual methods lies in the fact that the antiseptics penetrate the farthest limit of the respiratory spaced unaltered and bring about the beneficial results without interfering with the digestive organs. Experiments prove that the medicaments are distributed to even the bronchial twigs and are absorbed.

With this treatment the expectoration becomes greatly reduced in quantity and much less offensive. The purulent element disappears and expectoration resembles the frothy expectoration of simple bronchitis; fever and night sweats disappear and the patient gains in weight.

The diseases most suitable to this form of treatment are pulmonary and laryngeal tuberculosis, pulmonary and laryngeal syphilis, chronic bronchitis, inflammation of trachea, asthma and bronchiectasis. The solutions used by the author are menthol $7\frac{1}{2}$ to 15 per cent., guaiacol $\frac{1}{2}$ to 3 per cent. in benzonol or alboline; euophen 1 to 2 per cent. may be used instead of the guaiacol. In nervous patients he sprays or applies to the larynx a 2 per cent. cocaine solution. He uses the instrument suggested by Joseph Muir, which has a capacity of one-half ounce. One to four drams may be used. Injections are made about the same as laryngeal applications are made. As soon as the tube enters the larynx the patient is instructed to breathe, and the syringe is emptied to the desired amount.

In Forsyth's experience spasms of the glottis have never occurred and patients are not opposed to taking the injections.

The Present Status of the Ozena Question.—Z. GRUENWALD (*Archiv fuer Laryngologie und Rhinologie*, Band 13, Heft 2).—The author holds that the etiology of ozena is in some cases not understood, in spite of all the many theories that have been advanced. What we do know is that in the majority of the cases the

secretion originates from some focal suppuration, as disease of the accessory nasal cavities, adenoid tissue in the vault of the pharynx and in the nasal cavities themselves.

That the secretion is always fluid, most often odorless, but dries as the result of mechanical influences and becomes gelatinous and adherent owing to the action of the bacillus mucosus of Abel. That the atrophy, when not present primarily, is due to the pressure and the infectious influence of the accumulated crusts. That the odor is due to the saprophytic disintegration of the adherent crusts. That the treatment, unless the focal suppuration can be removed, is unsatisfactory.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

Contagious Conjunctivitis.—MYLES STANDISH (*Boston Med. and Surg. Jour.*, October 2, 1902).—This paper is a review of the several types of acute contagious conjunctivitis with an outline of modern therapeutic methods.

Acute Catarrhal Conjunctivitis is regarded as a self-limited disease, lasting from ten to fifteen days. The symptomatology is too well known to require description. The specific organism is, in the majority of cases, the Koch-Weeks bacillus, less frequently the pneumococcus is of Fraenkel, and rarely the diplobacillus of Morax. According to the writer's experience the application of finely powdered and dry iodoform, two or three times at intervals of twelve hours, notably shortens the attack.

Trachoma is regarded as contagious, provided contact be sufficiently close and continued (of the many instances of trachoma spreading through orphan asylums). Those who affirm the non-contagiousness of trachoma probably confuse the latter with follicular conjunctivitis. The following are points in differential diagnosis:

Follicular Conjunctivitis.

Follicles low and rounded.

Situated principally in lower fornix and lower lid.

Do *not* extend to bulbar conjunctiva.

No ptosis, pannus, cicatricial formation or ulceration of cornea.

Trachoma.

Follicles full, rounded. "frog-spawn like."

Situated principally in upper fornix.

Extend to palpebral and often to bulbar conjunctiva.

Ptosis frequent, pannus, corneal ulceration, cicatricial incurvation of lid.

The early classical treatment of trachoma consisted in the application to the follicles of crayons of alum or cupric sulphate. Under this regimen the follicular stage lasted from three to five months. Later, when the tissue had become cicatrized, the treatment was continued with silver nitrate in one per cent. to two per cent. solution. Atropia was used if the cornea was involved. Cases so treated could hardly ever be considered completely cured, as relapses to the follicular stage were frequent.

The modern treatment of trachoma is both surgical and antiseptic. After the evacuation of the trachomatous follicles by expression the evacuated crypts are thoroughly scrubbed with corrosive sublimate 1:500. The follicular stage which formerly lasted three to five months, has disappeared within twenty-four hours. Collyria, preferably of the sublimate, 1:5000, are subsequently used.

If new follicles appear they must be immediately evacuated. Under this treatment corneal complications are rare. Cure is complete in one to two years, usually without visible scarring of the conjunctiva or cornea. Where the case has reached the cicatricial stage and is complicated by pannus and corneal ulceration, the application of a decoction of the Jequirity bean has been found very effective in bringing the process in the lids to a stand-still and in clearing the pannus.

Statistics compiled from the records of the Massachusetts Charitable Eye and Ear Infirmary show that from 1880 to 1884, inclusive, 3.5 per cent. of all ophthalmic cases were cases of trachoma; from 1897 to 1901, inclusive, the percentage had fallen to 1.2 per cent. Again, from 1880 to 1884, 12.6 per cent. of all "house" patients were afflicted with trachoma, each case remaining in the hospital an average of 64.5 days. From 1897 to 1901 the trachoma percentage was three per cent., and the average length of hospital residence had fallen to twenty-nine days.

The exclusion of immigrants afflicted with trachoma has been a positive factor in the diminution of the disease, but modern antiseptic treatment, which permits the patient (after a relatively short hospital residence) to go among his associates with but little danger of conveying the contagion, is unquestionably the principal factor.

Gonorrheal Ophthalmia.—Ophthalmia neonatorum, which constitutes the most numerous class of this disease, is now treated exclusively in the hospital. The infants are admitted without their mothers, and are fed on modified milk.

The majority of cases have been treated with silver nitrate in one per cent. to two per cent. solution, usually painted onto the everted lids and washed off with water. If the fellow eye is unaffected the lids are dusted with iodoform (to prevent infection in case the dressing become loosened). The dressing is in the shape of a cocoon and is fastened to the cheek and brow by collodion.

Recently, protargol in from four per cent. to twenty per cent. solution has been used. It has been found more efficient than silver nitrate in preventing the formation of ulcers. In the last fifty cases, where a twenty per cent. solution was used exclusively, no case with a clear cornea on admission developed ulceration.

The Saemisch incision is advocated in cases of rapidly extending sloughing ulcers. The operation was performed in twelve cases and nine retained a clear cornea over the pupil. The immunity from intraocular inflammation subsequent to the operation is explained by the absence of micro-organisms other than the gonococcus.

Diphtheritic Conjunctivitis.—Prior to the days of bacteriology much confusion existed as to this type of conjunctivitis, and cases were variously diagnosed as purulent, gonorrheal and diphtheritic. The clinical picture is now well defined and includes conjunctival congestion, lachrymation, and a slight mucous discharge lasting three or four days. Diagnosis is impossible before the appearance of the characteristic tough, dirty-white, closely adherent membrane, which leaves a bleeding surface on separation. There is great conjunctival chemosis and edema of the lids. The diagnosis is absolutely confirmed by the finding of the Klebs-Loeffler bacillus.

Antitoxin should be administered at once without waiting for bacteriologic confirmation. The initial dose should be 4000 units, repeated at the end of six to eight hours. Virulent cases require three or four injections. Usually within forty-eight hours the danger-point has been passed. Of twenty-five cases of diphtheritic conjunctivitis observed in the South Department of the Boston City Hospital, one-third developed corneal complications. In only four cases was the cornea lost, all of which were cases of diphtheria complicating measles. The antitoxin appeared to exert a specific influence on cases of deep corneal infiltration with loss of substance.

Sudden Temporary Loss of Vision, Probably of Circulatory Origin.—J. W. BARRETT (*Ophthalm. Review*, October, 1902).—The patient, a male aged sixty, had been working hard, physically, for two weeks. On awakening from a two-hours' nap he found he was totally blind in the left eye. Two hours later he was able to distinguish the flame of a candle which "stood out" on a perfectly black ground. The blackness gradually grew less dense, "and then came a sensation as if a curtain were gradually dropping from before the eye." An hour later vision was perfectly restored.

Ocular examination the following day showed normal vision in either eye, and normal fields. Ophthalmoscopically, the superior nasal vein was found constricted near the disk. Pressure on the globe produced pulsation in the vessels of the fundus *except* in the constricted vein. There was no evidence of cardiac, arterial or renal disease, but the radial artery was atheromatous.

From reported cases it would appear that a retina deprived of its blood supply for more than an hour suffered irreparable injury, evinced by limitation or eccentricity of the field. In the present case blindness was total for at least two hours, but it must not be assumed that the retina was totally deprived of blood during this period. The pathology is "probably embolism *plus* spasm."

Severe Burn of the Eye and Face by Nitrite of Amyl, With Loss of the Eye.—E. A. SHUMWAY (*Phila. Med. Jour.*, October 11, 1902).—According to Wood "amyl nitrite has no irritating properties." As much as three drachms have been taken internally without fatal issue. Shumway, in a careful search of the literature, has been unable to find the report of a case in which it has caused a local destruction of tissue. The case reported is, therefore, unique. The patient, who was afflicted with Jacksonian epilepsy, had been given a small bottle of nitrite of amyl to use at the appearance of the aura. On one occasion he accidentally splashed a portion of the contents of the bottle into his right eye. The cornea, conjunctiva and the skin of the face were severely burned and the cornea subsequently sloughed. Later enucleation was performed to permit the wearing of an artificial eye.

An investigation into the chemistry of the drug revealed the fact that on exposure to light and air it undergoes decomposition, resulting in the formation of nitrous and nitric acids to which the severe burn was due. The writer makes the following suggestions:

(1) Nitrite of amyl should be supplied to patients for inhalation only in the form of the glass pearls.

(2) When in quantity it should be kept in small, well-sealed, glass-stoppered bottles, in a cool, dark place.

(3) A specimen which has been used a number of times should be tested very carefully, and, if on examination, it is found to have a decidedly acid reaction, it should be at once discarded.

BOOK REVIEWS.

ATLAS AND EPITOME OF ABDOMINAL HERNIAS. By DR. GEORGE SULTAN, First Assistant in the Surgical Clinic in Goettingen, Prussia. Authorized Translation from the German. Edited by WILLIAM B. COLEY, M. D., Clinical Lecturer on Surgery, Columbia University (College of Physicians and Surgeons); Surgeon to the General Memorial Hospital; Assistant Surgeon to the Hospital for Ruptured and Crippled, New York City. With 119 illustrations, 36 of them colored. Philadelphia and London: W. B. Saunders & Company. 1902.

Before us we have the English translation of a late German work that has attracted considerable attention and been most favorably commented upon by the German press. It forms one of the series of Saunders' hand-atlases, and must be considered in every way the peer of a number of those well-known books. The German author's excuse for a special work on hernia, is the fact that the malady is so common as to demand especial knowledge of the subject; then, further, the matter of strangulation exposes the patient to such extreme danger that only one perfectly acquainted with this field can expect to reap good results with any degree of certainty.

The author limits himself, we are surprised to note, to complimenting but two forms of radical operation as having stood the test of time: these are the Bassini and the Kocher; he says, moreover, that it is no matter what kind of suture material be used, since this is not a determining factor, but merely a matter of individual preference. Regarding the first named method, it must be said that the illustrations as well as the description of its steps are far more detailed and lucid than those usually found in the text-books. Kocher's method is illustrated by diminished copies of the cuts which appear in that famous surgeon's work on surgical technique. The antiquated Macewen method is accorded several pages. No fault can be found, however, with the handling of the matter of femoral hernia. The cuts can only be designated as beautiful, while the treatment is of the most approved. The chapters on umbilical hernia attest the author's familiarity with the facts of embryology.

QUAIN'S DICTIONARY OF MEDICINE. Third Edition. 1902. With 14 colored plates and numerous other illustrations. Edited by H. MONTAGUE MURRAY, M. D., F. R. C. P. 1892 pages. D. Appleton & Company, New York, publishers.

This standard dictionary of medicine in the present edition has been largely rewritten and thorough revised. The addition of fourteen well-executed colored plates is but one of the many new features which add to its value as a reference work. The list of contributors includes several hundred leading members of the profession, all of whom have given most careful attention to their respective articles.

The general plan of the book as first arranged by the late Sir Richard Quain has been maintained, though much of the text is entirely new, particularly as regards pathology.

MINOR SURGERY AND BANDAGING, INCLUDING THE TREATMENT OF FRACTURES AND DISLOCATIONS, THE LIGATION OF ARTERIES, AMPUTATIONS, EXCISIONS AND RESECTIONS, INTESTINAL ANASTOMOSIS, OPERATIONS UPON NERVES AND TENDONS, TRACHEOTOMY, INTUBATION OF THE LARYNX, ETC. By HENRY R.

WHARTON, M. D., Professor of Clinical Surgery in the Woman's Medical College of Pennsylvania; Surgeon to the Presbyterian Hospital, and the Children's Hospital; Consulting Surgeon to St. Christopher's Hospital, and the Bryn Mawr Hospital; Fellow of the American Surgical Association. Fifth edition, enlarged and thoroughly revised, with 500 illustrations. Lea Bros. & Co., Philadelphia and New York. 1902.

The mere fact that a fifth edition of this small work is wanted is sufficient warrant for the fact that the students and doctors think they are getting their money's worth out of it. The title is certainly misleading, for it is decidedly more than "Minor Surgery and Bandaging." It is, on the other hand, a condensed work on general surgery, gotten up in a small size. The chapters on bandaging certainly contain all that is required of writers of text-books on that subject, and it must be said that the cuts which illustrate the same are far above the average. However, there is nothing essentially "minor" about an intestinal resection, a statement which can be substantiated by any one who has ever tried it, but the chapters on that subject, too, are fairly good.

Among the emergencies, one of the best handled is "nose-bleed," the cuts serving aptly to illustrate what it is endeavored to teach.

But this is not all, for into the 621 pages offered the reader there is crowded a manual of operations upon the cadaver, something to be by no means despised, though hardly to be expected in a work ostensibly concerning itself with minor surgery and bandaging.

BEITRAEGE ZUR BAUCHCHIRURGIE. NEUE FOLGE. Von Prof. Dr. HANS KEHR, Oberarzt Dr. BERGER und Dr. WELP. Berlin W. 35. 1902. Fischer's Medicin. Buchhandlung H. Kornfeld. Price, \$1.00. (G. E. Stechert, New York, Agent.)

The introduction alone contains much that is of interest. The small work is dedicated to the dead Langenbeck, whom Kehr reveres as the originator of excision of the gall-bladder, an operation which is more frequently performed than other upon the biliary system. This dead Berlin surgeon was also the first to suggest the possibility of removing a stone from the common duct. This report, the second of the author's series, is to be continued every year in order that the world may know exactly what this master of abdominal surgery is doing in his especial field. The value of what lies before us, as well as that of what is to follow, may be gathered from the fact that Kehr did ninety-five gall-stone operations during 1901, these latter forming the subject of the report under discussion. Diagnosis is the author's leading theme; and he states the more endeavor is to be made, since no one can be perfect in this particular; for he, though he has done almost seven hundred gall-stone operations, still makes mistakes. No matter how well a surgeon may command the technique, says Kehr, the best of his work must be lost unless pathology and diagnosis receive their just consideration.

Kehr must have become wonderfully expert in this field, for he states that he can remove the gall-bladder in ten minutes or drain it in twenty or thirty minutes. The book contains the histories of the more interesting of these ninety-five cases and concludes with general information, of the eminently practical sort, on diagnosis and surgical technique.

CHIRURGIE DE L'INTESTIN, par M. JEANNEL, Professeur de Clinique Chirurgicale a la Faculte de Medecine de l'Universite de Toulouse. Deuxieme Edition. Revue et considerablement augmentee, avec 694 Figures dans le Texte. Ouvrage couronne par l'Academie de Medecine (Prix Laborie, 1899). Paris,

Institut international de bibliographie scientifique, 93 Boulevard Saint-Germain. VI. 1901.

This comprehensive work of 657 pages, devoted as it is alone to the surgical treatment of the intestine, could hardly be other than comprehensive; and such it certainly is, for it unites within itself all the original ideas pertaining to this field, no matter in what language they appeared. In this very particular Jeannel may be said to have gone a step farther than most of the other French medical writers, with whom the domestic scientific literature is notoriously all-sufficient.

An idea of the profusion of illustrations may be gained from the fact that almost 700 cuts are considered necessary by the author. Not only is the operative procedure thus better explained in most instances, but at the same time the reader is furnished with a picture of almost every instrument which could possibly be used in an intestinal operation. The idea is clearly, in most cases, to explain the steps of an operation so fully as to make it possible for one who has never seen the same to perform it; and it must be admitted that the author succeeds pretty well. The cuts would scarcely take high rank, viewed strictly as works of art; still many of them are intended to be schematic only, so fulfill their purpose.

One can gain an idea of the vast amount of work which has been put on the book, as well as of the amount of information contained by it, by a study of the fourteen pages devoted to the various means of uniting the intestines. These pages are printed in the form of tables and give a complete list of all the means and methods employed from 1753 (Palfyn) down to 1897 (de Boari). The list contains the name of every man who has published an original method, those of many Americans among them, St. Louis having one representative, A. V. L. Brokaw.

It is really surprising to find how many devices have been employed in the performance of an intestinal anastomosis. The author presents cuts of a vast number of buttons, clamps, forceps, bobbins, etc., which have been advanced as aids to the operation mentioned. It is safe to say that nearly every surgeon has thought out some scheme for rendering short and simple this procedure, and it is further safe to say that most of these ideas will be found to have been long since tried and found wanting, if a large work like that of Jeannel be carefully perused. Just in this connection the work at hand shows us that a surprisingly large number of surgeons have, through ignorance of a predecessor's efforts, published as new, devices which were older than themselves. By way of illustration, Ramage brought out in 1893 the exact appliance which d'Henroz had originated in 1826; a good reason for the surgeon possessing such a book as the one now being reviewed.

Our author deals, of course, very fully with the various methods of suturing the intestines, and I believe that many an experienced operator would be surprised to see how many ways have been devised for uniting with needle and thread this hollow viscus when divided. It may be said further that many of these methods have never found their way into the text-books. This again points the value of a "monograph" for the working surgeon, and such a volume is this one of Jeannel's. It is large enough to give every detail, something that cannot be expected from a student's text-book, no matter how well written.

OPHTHALMIC MYOLOGY. By G. C. SAVAGE, M. D., Professor of Ophthalmology in the Medical Department of Vanderbilt University, etc. Sixty-one illustrative cuts and six plates. Published by the author, 139 North Spruce street, Nashville, Tennessee.

This extended treatise of 589 pages is devoted mainly to an exposition of the author's views as to the role played by the ocular muscles in the production of

heterophoria. Many of the theories advanced are interesting, but the work as a whole is lacking in the judicial spirit. The author's enthusiasm from his own point of view often leads him into an unwarranted dogmatism. The nomenclature is elaborate and unnecessarily cumbrous.

VISUAL ECONOMICS. By H. MAGNUS, Med. Dr., of Breslau, Germany, and H. V. WUERDEMANN, M. D., of Milwaukee, Wisconsin. Pp. 144. Published by C. Porth, 105 Grand avenue, Milwaukee, Wisconsin. 1902.

Magnus' original work, "Leitfaden fuer Begutachtung und Berechnung von Unfallsbeschadigungen der Augen," was first published in 1894, in consequence of the passing of a Benefit and Accident Insurance Law in Germany. Prior to the appearance of this work, estimation of damages from ocular injuries and indemnity therefor had been made from the purely philanthropic standpoint. Magnus' calculations are founded on anatomical and mathematical data, and have been found entirely satisfactory in practical application. It has been found possible to foretell the probable loss of wages resulting from any given ocular accident, thereby establishing sufficient data to permit an exact estimation of the amount of indemnity.

Doctor Wuerdemann has added a number of chapters and has adapted the work to conform to the requirements of American law. The subject is a fascinating one, both from the medical and legal standpoints, and its presentation by the authors leaves little to be desired.

A MANUAL OF SURGICAL TREATMENT. By W. WATSON CHEYNE, M. B., F. R. C. S., F. R. S.; Professor of Surgery in King's College, London; Surgeon to King's College Hospital and the Children's Hospital, Paddington Green, etc., and F. F. BURGHARD, M. D., and M. S. (London), F. R. C. S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital, and the Children's Hospital, Paddington Green, etc. In seven volumes. Volume VI. The Treatment of the Surgical Affections of the Tongue and Floor of the Mouth, the Pharynx, Neck, Esophagus, Stomach and Intestines. Lea Brothers & Company, Philadelphia and New York. 1902.

This number, a worthy member of the series to which it belongs, contains 479 pages and 124 cuts. The general tone and tenor of the series has shown a marked improvement from the time the first volume was issued; one cannot repress a certain curiosity to know whether or not this betterment may not be due, in a measure at least, to the deservedly severe criticism which the first number received at the hands of the *Annals of Surgery* as well as other leading surgical publications. The early chapters on asepsis particularly, were so decidedly out of keeping with what the world now recognizes as standard, that they met with a well-merited rebuke; however, no such fate awaits the volume which lies before us.

On account of the absence of Mr. Cheyne in South Africa during the late war, this number was delayed in its appearance; also the amount of matter to be considered made it expedient to issue the entire work in seven volumes instead of in six, as originally contemplated.

Very interesting are the author's views as to the giving of morphine to a patient suffering from intestinal obstruction. He says that it is never to be given except as preliminary to operation for which the preparations are under way, under which circumstances if the disease be still in an early stage, the patient's condition may be markedly improved; on the other hand, the obstruction having lasted a long time, the drug may greatly increase the intestinal paralysis.

In acute suppurative appendicitis the author's plan is the conservative one, viz., the opening of the abscess merely, if by removing the diseased organ at the time there be the slightest danger of spreading the infection. In relapsing cases the McBurney incision is advocated; in other words, the appendicitis chapters may be called strictly up to date. In acute gangrenous and perforative cases the authors pack with iodoform gauze, a thing which surprises one who has seen the most serious consequences follow such a usage. Silk worm gut sutures are to be introduced and subsequently tied after the discharge has partly ceased, still, Mikulicz has concluded after long experience that this has no effect on the production of hernia.

A seven-volume work is of more value to practitioner than to student, because it can go into details, and can tell the man who must know, not merely when to do an operation, but furnish him with every detail of how to do it. This is accomplished by the work which we are considering.

VORTRAEGE FÜR AERZTE ÜBER PHYSIKALISCHE CHEMIE. VON DR. ERNST COHEN. Mit 49 Figuren im Text. (Lectures on Physical Chemistry, for the Use of Physicians, with 49 illustrations.) Leipzig: Verlag von Wilhelm Engelmann. 1901. (G. E. Stechert, New York, Agent.)

The researches that are now being followed out by the medical profession in biology and physiological chemistry require some knowledge of the general laws of physical chemistry, and also some understanding of the technical procedures that are necessary for a correct comprehension of this branch of science. The purpose of the work by Cohen is to condense into as brief a space as possible the general laws of physical chemistry for the guidance of medical investigators who may not have had time to read the full and exhaustive text-books on this subject. This work prepares one for an intelligent reading of the fuller text-books. It deals with the laws governing osmosis, the estimation of specific gravity, rules and illustrations of electrolytic dissociation, electro-motor reactions, and theoretical considerations of electrical phenomena.

The work is concise and written with the needs of the profession in view. It will be found a valuable hand-book for every physician who wants to keep abreast of the times.

COMPEND OF GENERAL PATHOLOGY. By ALFRED EDWARD THAYER, M. D., Assistant Instructor in Gross Pathology, Cornell Medical College. Containing 58 illustrations, several of which are printed in colors. Philadelphia: P. Blakiston's Son & Co. 1902.

The student who desires a quiz-compend on pathology will find this little book quite useful. While the reviewer doubts the efficacy or advisability of attempting to compass in a few hundred pages all the known facts of general and special pathology, he nevertheless admits that the quiz-compend serves to help the student, always providing that a full and complete text-book on the subject is studied. The work includes everything in as full and complete a style as can be accomplished in this way. It certainly is written in a scientific and scholarly manner and tells all that can be told in the short space given to such a voluminous subject.

THE ROLLER BANDAGE. By WM. BARTON HOPKINS, Surgeon to Pennsylvania Hospital and to the Orthopedic Hospital. J. B. Lippincott Company, Philadelphia.

This book in its new form makes a handy and attractive work. The descriptions which accompany the photographic illustrations are excellently done,

and there are many valuable suggestions given in the work which aid the practitioner as well as the student. The recent publication of many indifferent hand atlases leaves little room for any more of their kind, but the appearance of a good, short treatise conveniently arranged is always welcomed.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M. D., assisted by H. R. M. LANDIS, M. D. Volume III. September, 1902. Lea Brothers & Co., Philadelphia and New York. Price per volume, \$2.50; per annum, in four cloth-bound volumes, \$10.00.

The popularity of this publication relieves us from the necessity of saying anything in its praise. Let it suffice to give the contents of the last volume just published: Diseases of the Thorax and Its Viscera, Including the Heart, Lungs and Blood Vessels, reviewed by William Ewart, M. D.; Dermatology and Syphilis, by William S. Gottheil, M. D.; Diseases of the Nervous System, by William G. Spiller, M. D.; Obstetrics, by Richard C. Norris, M. D.

There is no question that Progressive Medicine stands unrivaled in its class.

DUDLEY'S GYNECOLOGY. A Treatise on the Principles and Practice of Gynecology. By E. C. DUDLEY, A. M., M. D., Professor of Gynecology in the Northwestern University Medical School, Chicago. New (3d) edition. Enlarged and thoroughly revised. In one very handsome octavo volume of 756 pages, with 474 engravings, of which 60 are in colors and 22 colored plates. Cloth, \$5.00, net. Leather, \$6.00, net. Half morocco, \$6.50, net. Lea Brothers & Co., Philadelphia and New York.

The new edition presents not only a thorough revision in both text and illustrations, but by judicious pruning of old matter it has been found possible to add nearly one hundred pages, twenty-five new engravings and fourteen plates without considerably increasing the size of the volume.

In the present form we consider the book a model text-book on the subject of gynecology, and feel justified in recommending it to our readers as a thoroughly practical work.

DIE THIERISCHEN PARASITEN DES MENSCHEN (Animal Parasites of Man). A Hand-Book for Students and Physicians. By DR. MAX BRAUN, Professor of Zoology and Comparative Anatomy, and Director of the Zoological Museum, in the University of Koenigsberg. With 272 illustrations. Third enlarged and revised edition. Wuerzburg: A. Stuber. (C. Kabitsch.) 1902. (G. E. Stechert, New York, Agent.)

This excellent work now appears in its third enlarged and revised edition. It deals with the animal parasites that affect man. A very good description of the characteristics of the ameba coli, the causative agent of one form of tropical dysentery, is given. The description comprises all of the published articles, including the classical work of Councilman and Lafleur. The chapter on the malarial plasmodium is good, especially the part relating to the life-habits and anatomy of the varieties of mosquitoes which carry the plasmodium.

Full bibliographical references are given for the benefit of those who wish to follow up the original articles on the several subjects. As a compilation of all the known facts on animal parasitology, no one can afford to be without this work. The subject is completely considered and logically treated.

ATLAS OF FRACTURES AND DISLOCATIONS. By H. HELFERICH, Greifswald, Prussia. Edited by T. C. Bloodgood, Baltimore. Fifth edition. Saunders & Co., Philadelphia and London.

This work, while not large, is a very comprehensive and instructive book. The text, which so frequently in such works is meager, is in this instance full and carefully describes the numerous types of fractures whether they are pictured or not. The plates are of a high order, and show conditions such as were observed in living subjects or produced on the cadaver, and most of the typical fractures are pictured in X-ray shadows. The treatment of the various conditions is not shown by illustration in any great extent, but the text contains rather short but clear description. The revision of the book was fortunate in that the best of German thought is not changed, but is commented upon, and additions or corrections made where explanations or methods differ. The fracture phase is much more fully and better described than dislocations, but the general impression from the book is excellent.

THE TREATMENT OF FRACTURES. By CHAS. L. SCUDDER, M. D., Assistant in Clinical and Operative Surgery, Harvard Medical School. Third edition, revised and enlarged. Octavo, 480 pages, with 645 original illustrations. W. B. Saunders & Co., Philadelphia and London. 1902.

The scope of this work is limited in most part to the treatment of fractures, and this treatment is one that the author uses and has found most serviceable. The text is prepared with great care and minutely details each method used, and as simplicity is the desideratum, most of the cumbersome devices usually described by fracture treatises are omitted. The book has been exceptionally popular since its first appearance, and in this new edition many new points are added and the old text carefully revised. The illustrations are of a high grade, and the numerous X-ray tracings show excellently the points that the author tries to bring out. However we may differ from the author's views in the selection of the method, the book remains a collection of clear and concise descriptions of good methods, and if his text is carefully followed will lead to good results.

BEITRAEGE ZUR KENNTNISS DER MYASTHENIA UND DER VERWANDTEN SYMPTOMEN COMPLEXE. By T. FAJERSZTAJN. Franz Pietzcker, Tuebingen, 1902. G. E. Stechert, New York Agent.

This is a monograph of some sixty pages, containing a very good bibliography and several plates on the microscopical examination of a case of myasthenia gravis. The material, upon which this study is based consists of four cases, one of which came to autopsy. In addition, two further cases of bulbar spinal paralysis are added as having some sort of relation with the cases forming the subject of this paper. The cases are carefully described and the chief points of diagnostic importance are brought out with clearness. In a concise resume the various theories in regard to etiology and pathology of myasthenia are noted. In this little pamphlet is contained all that we know of myasthenia gravis, stated in such a clear and interesting way that it forms a very readable monograph.

HYGIENE DE LA FEMME; ENFANT—JEUNE FILLE—FEMME MERE ET AIEULE, par le DR. PLATON ET LE DR. SEPET. Paris: C. Naud, editeur. 1902. Prix 4 francs.

In this book the authors have compiled everything that pertains to the hygiene of womankind. Avoiding all controversial and theoretical points, they have limited themselves to the suggestions sufficiently proved in practice to be

perused by both the physician and nurses with the greatest benefit. In the editorial pages of this issue we speak more in detail of the contents and the merits of this volume. We will here restrict ourselves to stating that we most warmly recommend it to the general practitioner, who, by proper prophylaxis, can do so much in preventing diseases, to nurses and midwives who will be enabled to rightly conduct the hygiene of infancy and the puerperium, to the teacher in schools and convents, and—last, but not least—to the mothers.

It may be added that the style is exceedingly pleasing. The make-up of the book is neat, and the price very moderate.

GRAYSON'S LARYNGOLOGY. A TREATISE ON THE DISEASES OF THE THROAT, NOSE AND THE ASSOCIATED AFFECTIONS OF THE EAR. By CHARLES P. GRAYSON, M. D., Lecturer on and Instructor in Laryngology in the Medical Department, University of Pennsylvania. In one octavo volume of 540 pages, with 129 engravings and 8 colored plates. Cloth, \$3.50, net. Lea Brothers & Co., Philadelphia and New York. 1902.

The principal aim of the author in bringing forth this volume has been to simplify the treatment of these specialized regions, in order to avoid confusion. He has endeavored to give but one plan of treatment under each disease and present the methods of examination and therapeutic technique in as practical a way as possible. In this we think he has succeeded admirably. The work is rich in practical illustrations, and is in every way specially suited for the practitioner and student.

DISINFECTION AND DISINFECTANTS. A PRACTICAL GUIDE FOR SANITARIANS, HEALTH AND QUARANTINE OFFICERS. By M. J. ROSENAU, M. D., Director of the Hygienic Laboratory, and Passed Assistant Surgeon, U. S. Public Health and Marine Hospital Service, Washington, D. C. P. Blakiston's Son & Co., Philadelphia. 1902. Price, \$2.00, net.

This work is a practical dissertation of disinfectants and methods of disinfection. The author has had a wide experience in the laboratory of bacteriology and hygiene, and also in the field as a public health officer. He therefore has had the proper experience to fit him for the task of writing a work on a practical subject of this kind. He discusses the present methods of disinfection in general and devotes considerable space to a consideration of each communicable disease in turn, giving the methods of stamping it out of an infected place. We bespeak for Rosenau's efforts marked success. The physician will profit by a perusal of the work. It gives in collected form, arranged in the order of importance, data which would indeed be difficult to find were one compelled to wade through medical literature for it.

ATLAS AND EPITOME OF OPERATIVE SURGERY. By DR. OTTO ZUCKERKANDL, Privat-docent in the University of Vienna. From the second revised and enlarged German edition. Edited, with additions, by J. Chalmers Da Costa, M. D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia, etc. Second edition, thoroughly revised and greatly enlarged. With 40 colored plates, 278 text-illustrations, and 410 pages of text. Philadelphia and London: W. B. Saunders & Co. 1902. Cloth, \$3.50, net.

The Saunders hand-atlases are too well known to need any introduction in general; it is sufficient to say for this particular number that it is in every way

up to the standard of its predecessors. In fact, it may rightly be said to have an advantage of most of them, consisting as it does of the translation of a small work which was written by a famous Vienna surgeon, a book which has been favored by a wide popularity on the other side of the water.

The author's long experience together with his well-known theoretical knowledge has enabled him to produce a volume which for its size is not excelled in this field. Of course, the hand-atlases do not pretend to rival the recent great works like those of Bryant in our own language, and others of similar caliber in German and French; however, they meet the wants of the student and average general practitioner. In fact, it was the idea of Prof. Zuckerkandl to write a book for students; hence, the operative surgery upon the cadaver is given especial prominence, while the great operations of the specialist receive but a brief description.

The illustrations, of course numerous from the very nature of the work, are of the well-known Saunders execution. The revised edition, from which our copy was translated, was found necessary to bring the subject-matter strictly up to date, and the Saunders house can surely be congratulated upon receiving the Zuckerkandl book into the list of the hand-atlases.

SOCIOLOGIC STUDIES OF A MEDICO-LEGAL NATURE. BY LOUIS J. ROSENBERG, LL. B., Associate of the Victorian Institute, London, England; Michigan Delegate to the American Congress of Tuberculosis (1901), etc., and N. E. ARONSTAM, M. D., Ph. G., Assistant in Chemistry and Dermatology, Michigan College of Medicine and Surgery, etc. With Introduction by Hon. Clark Bell, LL. D., President of the Medico-Legal Society. Pages, 142. Bound in red cloth. Price, \$1.00, net. G. P. Engelhard & Company, Chicago. 1902.

This collection of essays, dedicated rather fulsomely to Tolstoi, is interesting more on account of the title under which it is published than from the contents. It is very suggestive that popular essays dealing with such subjects as crime, the drink evil, euthanasia, premature burial, tuberculosis and the like, should have been published as sociologic studies. While this volume of itself is not a very marked contribution to the knowledge of the subject, yet the purpose underlying its appearance, which is manifestly that of bringing into closer touch the scientific side of such subjects with society at large, from which they originated, is to be commended.

NEUROLOGICAL TECHNIQUE. BY IRVING AND HARDESTY. University of Chicago Press. 1902.

This is a clear account of the various methods employed in the microscopical investigation of the central nervous system. It is in some respects an improvement on the well-known book of Pollack, in that it gives Apathy's and Bethe's technique of the demonstration of the neurofibrillæ. It might be suggested that too great attention to details is of doubtful value in manuals of this kind, because every laboratory worker develops after a time his own special method, which are adapted to his own manner of working and which are not successful in the hands of others. This little book may be regarded as a valuable adjunct to the laboratory aids of the neuro-pathologists, and the care in its preparation is worthy of praise.

RECHTS UND LINKSHAENDIGKEIT. BY FRITZ LUEDDECKENS. Wilhelm Engelmann, Leipzig. 1900. (G. E. Stechert, New York, Agent.)

In this work of some eighty pages an attempt is made to present a plausible hypothesis to explain the great preponderance of righthandedness among the

human race. The author approaches the solution of this problem in a manner which commends itself to the reader, even if his conclusions are not convincing. He begins by an anatomical-physiological introduction, as the result of which he divides all mankind into three groups: First, the great majority, in whom there is a higher blood pressure in the left than in the right side of the head; second, those rare individuals who have, presumably, the same blood pressure in both sides of the head; and, third, a minority, who have a higher blood pressure in the right than in the left side of the head. The sight and hearing, and the special senses are studied in each of these classes. In the second group the equal pressure in both sides of the head gives rise to double personality. It can be said that this monograph forms an interesting but an absolutely theoretical exposition of the subject. Its physiological data are its weakest part, and as the author draws most of his conclusions from them, they cannot be accepted. The book, with these reservations, will repay reading by those who have an interest in the subject.

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ORIGINAL ARTICLES.

BLADDER DRAINAGE.*

BY REGINALD HARRISON, F. R. C. S., of London, England.

I propose taking this as my subject to-day and illustrating its practice by a case which will serve as material for comment. And before introducing the patient for examination there are a few points I would remind you of as bearing directly upon the cause and treatment of many bladder affections. In the first place, we must recognize that the power to completely empty and drain the bladder voluntarily of its contents is an act of nature which cannot be regularly deviated from without exposure to some risk of exciting disease. For it must be remembered that though normal urine under normal conditions may be said to be innocuous, it is capable by its confinement and decomposition of producing serious and disastrous effects upon the parts it may come in contact with, even of sufficient intensity to effect thereby its own escape.

And when we compare the male with the female urinary apparatus we shall I think conclude that the greater complexity of the mechanism of urination in the former instance as compared with the female carries with it a greater liability to an incomplete performance of the act and to those disorders which may emanate out of a continued imperfect evacuation of the bladder. For this reason alone the question of urine drainage and its substitution by artificial means oftener requires our consideration in the case of males than in the opposite sex.

The points I wish more particularly to ask your attention to before demonstrating the case are these:

First.—What disorders may follow upon a continued state of more or less incompleated urination, or, in other words, imperfect drainage of the bladder by natural efforts?

Second.—In what circumstances apart from various forms of catheterism may artificial drainage be advantageously employed and how may this be best effected?

Third.—What are the conditions which call for the regular use of catheter drainage?

These are interrogations of a practical character which constantly occur in practice; some differences of opinion will arise in responding to them, relative both to principle and detail, and thus such questions provide excellent material for consideration in connection more particularly with post-graduate work.

I will pass on to notice in the first place, and to ask you to recall from your own knowledge or observation, some of the diseases and disorders of the urinary

* A lecture delivered at the Polyclinic, London, September 17, 1902.

organs which are recognized as being caused or arising out of a chronic state of imperfect bladder emptying or drainage. They are by no means isolated instances or confined to one portion of this set of organs.

Their frequency is, however, in some degree relative to the time of life at which they occur. In male children and in early adult life disorders arising out of continually retained urine are comparatively rare, and this is in some measure due to the position the bladder occupies in respect to other pelvic organs. For in child life it may be said to be a supra- or extra-pubic organ, as it gradually descends as age proceeds in the direction of the true pelvis. Those of us who had much to do with lithotomy in children before crushing was so largely substituted will remember this relative to the direction of the knife, on entering the bladder as compared with the plane of the adult viscus. Hence provision for natural urine drainage in the child is as perfect as possible. I recently said in my Hunterian lecture* that spasm would occasionally in these instances antagonize the natural gravitation and expulsion of the entire contents of the bladder and had thus been proved to be the cause of nocturnal enuresis. For this reason the occasional use of a catheter, even in such young subjects, may not only be necessary, but be completely successful, in arresting the complaint.

In older adults the planes of the posterior wall of the bladder and its outlet seldom undergo any alteration which will interfere with urine drainage, unless caused for instance by stricture or growth. In still more advanced life, when the sixties are reached or even before, there is a tendency, as I pointed out some years ago in connection with the earlier forms of prostatic obstruction, for some sinking of the posterior wall of the bladder to take place. This throws even the natural sized prostate into prominence, just as bending a piece of paper gives an angle or elevation to a portion of the surface which did not previously exist. Thus bladder drainage or emptying is rendered imperfect and the first stage of prostatic obstruction is reached in this simple but easily overlooked way. This, I believe, explains how about the sixtieth year of male life the incomplete emptying of the bladder is not uncommon though physical evidence of enlargement of the prostate may be still wanting.

Passing from these changes occurring at well-defined periods of life I will remind you of some disordered states directly or indirectly caused by retained and undrained urine. Apart from functional disturbances explained by mechanical reasons, such as frequent urination or incontinence from overflow, we have a number of more or less serious conditions which may be classified either as (1) intra-vesical or those happening within the urinary apparatus, and (2) extravescical or those principally in relation with the structures outside.

1. The intra-vesical states of disorder thus arising from retention include the various degrees of cystitis or inflammation of the bladder with suppuration and the exudation of considerable quantities of mucus caused by ammoniacal decomposition of sacs or otherwise, of retained urine. The extension of these conditions upwards into the ureters and the passages within the kidneys and the dilatation of these parts, and further the distortion of the bladder itself by the formation of trabeculæ, pouches and sacs, all of which may be caused by the retention of secretion which is either retained or discharged under the high muscular pressure of expulsion. Thus from the retention and decomposition of

* Hunterian Society of London, February 26, 1902.

urine may the bladder and urinary apparatus generally be assimilated with a chronic abscess.

In another class of cases the chronically unemptied and undrained bladder becomes liable from time to time to the formation of phosphatic stone. This is more especially the case where persons have previously suffered and been operated upon for other kinds of stone, such as the urates and oxalates. Where this state of things is due to the obstruction caused by an enlarged prostate, great care has to be exercised after the stone has been removed to keep the bladder thoroughly cleansed by regular washing, otherwise a recurrence is extremely likely to take place. Where there is no enlargement of the prostate and the patient after an operation for stone is able to completely empty his bladder by his own spontaneous efforts, as is usually the case with male children and young adults, recurrence after litholapaxy is extremely rare. Whilst in cases where the bladder is never spontaneously emptied and drained, the liability to recurrence is considerable. This is a point of importance relative to urine drainage.

These then are a few instances of the intra-vesical effects of morbid urine arising out of its chronic retention.

2. The extra-vesical effects of undrained urine are seen in cases where urine has been extravasated into the tissues outside the normal passages, as in the acute forms of this very serious lesion, and in the more chronic ones where it makes its way through the perineum and contiguous parts by means of false passages and sinuses. This class (designated as No. 2) will be considered at my next clinical demonstration on October 15th. I will pass on to consider the circumstances apart from catheterism under which substituted drainage may be advantageously employed and how this may be effected.

Bladder drainage or the artificial withdrawal of urine is usually practiced by means of drainage tubes known as catheters. They are of endless variety and no one is wise who commences to use them without professional advice as to their selection and the precautions necessary in their employment.

A bougie, another form of urethral instrument, is not a tube, but a solid instrument used to dilate strictures or to prevent their recurrence. A catheter should never be constantly used where a bougie or solid instrument is only required. I will mention a case in point as a reason for this somewhat commonplace remark.

I saw a middle-aged man some time ago who consulted me about a troublesome stricture, which on one occasion had caused a painful retention of urine. The stricture had been carefully dilated for him and he had been taught and directed to pass a bougie for himself twice a week. However for reasons of his own he substituted a catheter of a corresponding size. He was very well when I saw him, and he consulted me as to his going abroad for a long period for business purposes. I advised him not to use a catheter but to revert to his bougie and to pass it regularly at increasing intervals as he had been directed. This he did not do, but continued to use his catheter as a dilator and at the same time to empty his bladder of any urine it might happen to contain. Yet he was able to completely evacuate his bladder by natural efforts. By the end of a year from this date his bladder gradually, but surely, struck work and at the age of forty-two he became absolutely dependent on his catheter, though there was no evidence to show any remaining structural opposition either in the urethra or the prostate to cause this. I have seen many instances of this and cannot but con-

clude that it is hazardous to gradually lead the bladder in the direction of abrogating its functions without sufficient reason.

But I am not speaking today of that large class of bladder and urinary cases for the drainage of which in some form or other, either used intermittently or by retaining it temporarily, a catheter suffices. I have referred to the bladder as sometimes by reason of decomposing urine and its effects resembling, so far as its contents are concerned, a chronic abscess. In such instances it will sometimes be found that the drainage of a catheter aided by the most thorough and careful washing-out fails to supply that free and continuous drainage which is required. In this respect the resemblance to a chronic abscess still holds good where other measures than a drainage tube and irrigation become necessary. It is in such exceptional cases that a more complete method of draining than any catheter can provide has to be considered. Bladder drainage of the nature I am now referring to is usually carried out by either opening the bladder itself above the pubes or the adjacent urethra from the perineum where something such as a growth has also to be removed; the former is the better, whilst if it is merely a matter for draining off dependently the foul contents of a never emptied bladder the perineal route is to be recommended.

Twelve months ago I drew your attention to the method I usually employ for urine drainage by the perineum. For the information of those that were not present at that demonstration I will briefly mention some of the points connected with this operation to which I attach importance. The operation consists in puncturing the membranous urethra on a centrally grooved staff sufficient to permit of the introduction of a finger into the bladder followed by a drainage tube made to fit correctly both in length and in relation to the surrounding tissues without side leakage. For the first forty-eight hours or so a specially made gum elastic tube known as my pattern should be used. On the withdrawal of this a soft gum elastic one (Annandale's pattern) with a drainage continuation and tap is substituted.

In this way a patient may be up and about in a few days wearing his apparatus and draining comfortably. A long confinement to bed is so avoided and the patient's condition is assimilated with that of an individual wearing and going about with a tracheotomy tube. In some instances the drainage soon proves effectual in restoring the natural character of the urine and can be dispensed with, whilst in others, for instance in advanced forms of prostatic obstruction, patients have by the permanent use of the apparatus been enabled to lead comfortable and useful lives without incurring the risks connected with more serious operations. In the journal* an abstract of a number of cases where bladder drainage was employed after the method I have described, some of which I showed here, will be found.

The third point for consideration is, what are the conditions which call for the use of catheter drainage, or, in other words, when should persons be advised to supplement voluntary efforts to empty the bladder by aid of a catheter? If the adoption of this proceeding were only of a temporary nature and speedily led to the complete restoration of the function of the bladder, one would not hesitate in recommending its trial in cases of residual urine with little or no delay, but when we recognize that such is not usually the case and that catheter life when once commenced is seldom ended, the matter is one that requires careful consid-

* Polyclinic, October 2, 1901.

eration. To condemn a man to the use of a catheter for the remainder of his life, however necessary this may be, is no light responsibility. A calculation made by a patient of mine to the effect that in ten years he had passed a catheter for himself nearly fifteen thousand times furnishes material for reflection; though these numbers are large they are by no means exceptional.

It is not the mere fact that a person fails to empty the bladder spontaneously by some ounces that should warrant us in advising that the balance be removed from time to time by a catheter. There should be other reasons than this. We should know that he is in some way inconvenienced or even harmed by the degree of retention, whatever it may be. And in using the word "inconvenience" I should be disposed to require evidence that it amounted to something more than this, either by reason of the frequency of the act, or the straining or "stammering" it called forth. Rising once or even twice in the night and with corresponding calls in the daytime would hardly suffice to warrant interference. In many instances I have thus concluded and allowed persons, though the function of micturition was more frequent than normal, and there was always a residuum of urine, to continue without recourse to the catheter. In thus advising, some have lived in comfort for many years without such assistance and without, I believe, detriment, whilst in others the adoption of catheter life has been advantageously postponed for some time. Then again it by no means implies that frequency is lessened and good nights secured in all cases where a catheter is advised. Considerable discretion, however, has to be exercised on these points.

The two reasons for the adoption of catheter life, namely, incontinence arising from the overflow of residual urine and decomposition of the excretion, are rarely debatable; where one or other exists the catheter becomes a necessity. In advising patients with some residual urine, in those instances, where the odor of the excretion is unnatural and offensive, I do not think this can always be correctly assumed as caused by decomposition. The most careful and regular catheterism combined with washing out the bladder with various things will often fail to remove it. It is a sickly sort of odor and usually occurs in cases of enlarged prostate and differs entirely from ammoniacal decomposition. It is, I believe, best treated by that class of drugs which are supposed to exercise a sterilizing effect on the urine. Of these urotropin, benzoate of ammonium and salol are probably the most suitable, and may be administered in sufficient doses without disturbing the digestion. In this way the urinary organs may be flushed from the kidneys downwards, a form of washing out which may often be advantageously combined with drainage.

PROTECTIVES AGAINST EFFECTS OF X-RAYS.

BY WM. ALLEN PUSEY, A. M., M. D., of Chicago.

The question of protecting surrounding surfaces against the effect of X-rays comes up in all methods of using the agent for therapeutic purposes. This can be done in two ways: first, by surrounding the tube with an opaque covering so that the rays have exit only at one point; second, by covering the surrounding parts with some material opaque to X-rays. The first method is usually carried out by placing the tube in a box with a window in it through which the desired area of X-rays has exit. An example of these boxes is the one recommended by Williams, which is essentially a wooden box, painted on the inside with white lead. The objection to this method is the cumbersomeness of such a device and the inconvenience of using it. The second method, that of interposing shields between the rays and the surface, is more convenient under most circumstances. The first material suggested for these shields was lead, and lead in some form is the material generally used. Schiff and Freund suggested sheet lead one-twenty-fifth of an inch thick, to be covered with a blotting paper. Kienboeck uses lead plates, which he covers with flannel. Williams uses for the face "a mask made of gauze, and pressed into the shape of the face, such as may be purchased at theatrical supply houses," and he covers this with tin foil. Others have suggested the use of several layers of lead foil such as is used for lining tea boxes. Grube has suggested a foil made of 95 per cent. lead and 5 per cent. tin, plated with tin. This makes a foil of the brightness of tin that does not rub off like lead. Two to four thicknesses are required in order to furnish sufficient protection. I have invariably used sheet lead from one-fiftieth to one-twenty-fifth of an inch thick. Roentgen states that sheet lead one-sixteenth of an inch thick practically excludes all X-rays. I have found on trial that a rapid photographic plate, covered with lead one-twenty-fifth of an inch thick, shows almost no trace of X-rays from a strongly lighted hard tube after fifteen minutes' exposure. Fifteen minutes' exposure to a similar light of a photographic plate under one-fiftieth inch lead shows appreciable but very slight effect. The one-fiftieth inch lead, therefore, probably furnishes perfectly safe protection. I have found, however, lead one-thirty-second of an inch thick not too thick to be conveniently handled, and it is I believe the best thickness for these masks. Lead of this thickness of any width can be obtained from any plumber's supply house. My practice from the start has been to cover the masks on both sides with ordinary wrapping paper. This makes them clean to handle, furnishes satisfactory insulation for the lead, and has the advantage of being easily washed off and replaced. It is simpler than the other coverings suggested and can be more readily renewed. These lead sheets can be made of any size with apertures in them of any desired shape, and very little ingenuity is required to adapt them to any of the surfaces of the body. For most work about the face these masks can be very readily adapted without any especial shaping, but where it is desired to make a mask of the shape of the face, I have found it exceedingly convenient to possess a model of the head and neck made in wood. On this mould it is easy with a little practice to hammer the lead sheets into perfect masks of the face. Holes of any shape can be cut in them and the masks then covered with paper.

For exposing special parts masks of special design are required, but with a little patience I have never found it difficult to adapt a mask to any part of the body. For making exposures in the mouth and pharynx I have used lead masks of sufficient size to cover the face; to this is soldered at right angles a short piece of block tin tubing such as plumbers use, and a hole is cut through the mask to correspond with the hole in the pipe. This pipe can be moulded or cut to the shape desired. In this way a speculum can be improvised which I have found quite useful. The patients have not objected to it. For making vaginal exposures I have used the ordinary Ferguson glass specula. The patient is placed on an ordinary gynecological table on the back, with the knees drawn up as for vaginal examination. The thighs are protected by lead masks, which reach from below the knees to the inguinal folds. Another mask is made wide enough to entirely protect the perineum, with a slit in it corresponding in width to the speculum. This is placed around the speculum in such a way as to protect the perineum. The speculum must be retained in position by an assistant's hands, and the additional protection needed in order to cover all exposed parts is furnished by a lead mask which the assistant places around her hand. This plan of protecting the perineum, while apparently cumbersome, has proved not difficult to carry out and satisfactory.

For making exposures in the mouth or vagina, or even in the rectum, Caldwell's tube furnishes far and away the best method. Indeed his tube for treating these cavities is in my opinion the greatest single addition that has been made to the technique of the therapeutic application of X-rays.

A good deal of ingenuity has been wasted in trying to devise masks to supersede lead or other metals opaque to X-rays. Among these hard rubber masks have been suggested. Hard rubber furnishes almost no obstruction to the passage of X-rays, and furnishes no adequate protection against the X-ray effects on tissues. If for any reason it is impossible to use lead, some slight protection may be obtained from the use of the oxide of zinc adhesive plaster. It is also possible to make a paste of an indifferent ointment and some powder opaque to the X-rays that will give protection. If bismuth subnitrate, which is opaque to X-rays, is rubbed in sufficient quantities with vaseline, or any other indifferent ointment, a paste may be made which furnishes strong obstruction to the X-rays. A layer one-sixteenth of an inch thick of a paste made of equal parts by weight of vaseline and bismuth furnishes fairly good protection to the skin upon which it may be spread.

At one time it was said that the coating with vaseline of a surface to be exposed to X-rays would protect it against X-ray burns. I have seen X-ray burns occur in many instances under vaseline and other ointments transparent to X-rays. Lately the interposition of a layer of paraffine has been suggested for the same purpose. This suggestion is doubtless a lineal descendant of the vaseline idea and is absolutely useless. I have experimentally produced X-ray burns under a coating of paraffine one-sixteenth of an inch thick, and I have no doubt that with equal ease I can produce a burn under a layer of paraffine one-half an inch or an inch in thickness. Indeed I think it may be stated dogmatically that nothing will prevent X-ray effects upon the tissues except substances which are opaque to the rays. The only thing necessary to produce X-ray effects upon the tissues is for the rays themselves to reach the exposed surface.

THE REPOSITION OF FRACTURED FRAGMENTS AS INDICATED BY THE ROENTGEN RAYS.

BY CARL BECK, M. D., of New York.

Success in the treatment of fractures is based upon proper reduction of the displaced fragments. A displaced bone fragment conveys pressure upon the adjacent tissues, and a keen-edged fragment, if not reduced at once, may put the overlying tissues under such extreme tension that even a simple fracture may be changed into a compound.

If the displaced fragments are situated in the neighborhood of a joint, extreme protrusion of one of the fragments may be caused. If united in this false position the motion of the joint would be rendered painful, or even impossible. If one of the fragments rides upon another (juxtaposition), pressure is exerted on the soft tissues. Nerves passing over this region will be dislocated or unduly stretched so that atrophy or inflammation may result. In the latter instance neuritis, in the first paralysis, may result. Similar views apply to the tendons.

So reduction means the immediate relief of pressure. Non-reduction means persistence of pressure; in other words, permanent injury to the compressed tissues.

In order to accomplish exact reposition, the degree as well as the direction of the displacement must be known. If we can diagnosticate the false direction, our anatomical knowledge enables us to move the displaced fragment towards its normal position. If the fragments are situated at a superficial part of the body, the experienced surgeon sometimes *guesses* right, and after union is perfect he will *know* whether he had guessed right or not. If he did not, it is too late to correct.

The surgeon whose experience enables him to realize these facts does not want to guess but to know, and he can always know if he takes the trouble of consulting his infallible adjunct—the Roentgen rays. The rays tell him the mode and degree of the displacement of the fragments and thus suggest the therapeutic steps at the same time.

If the rays show the absence of displacement no effort of reduction should be made. Immobilization in a suitable dressing is the only thing required.

If the Roentgen rays show the direction of the fragment to be upwards, downward pressure has naturally to be used by the surgeon, and *vice versa*. If the direction of the fragment is lateral, sideward pressure will be indicated. After reposition is accomplished a plaster of Paris dressing is applied. The fluoroscope of the skiagraph indicates, then, whether reposition was perfect or not. If not, the dressing must be removed and the position corrected. The character of the mistake made being recognized now, proper reposition can be expected with a greater degree of probability. But if the surgeon has failed again, he must change his dressing until his Roentgen guide shows him that he has succeeded in his efforts of reduction.

In fractures of the forearm or leg, where two bones are concerned, displacement may take place at different directions.

The text-books generally speak of one kind of displacement only. That such information is insufficient is proven by the Roentgen rays. Our illustration, for instance, represents a simple Pott's fracture in a woman of thirty-five

years. The fact that the internal as well as the external malleolus was fractured had been ascertained in this case before the Roentgen rays gave detailed information, since ecchymosis, intense pain, crepitus and abnormal lateral mobility at the ankle were present.

I was taught that reduction is accomplished best in such cases by pushing the calcaneum inward and forward. I have sometimes been surprised that in spite of carefully controlling the after-treatment, which consisted in the application of a Dupuytren's splint, in most of my cases there was an unsatisfactory result. When I found undue prominences around or below the malleoli, I consoled myself that there was excessive callous formation.



The Roentgen rays have shown the fallacy of such theories. What we so readily used to term callous proliferation was nothing else but a projecting piece of bone-fragment, adherent in a displaced position.

The above illustration shows that while the fibular fragment is laterally displaced, the tibial is directed downwards. Naturally, inward pressure upon the fibular fragment must put it into perfect apposition. But the tibial fragment could not be reduced laterally. In the first place, it would meet an obstacle in the astragalus, to which it descended; and, secondly, if there would really be no obstacle, it could not be pushed into its normal position by being pressed inwardly. The skiagraph, by showing us the descension of the fragment, tells us distinctly at the same time that proper reduction can be accomplished by

ascension only; in other words, by pressure in the *upward* direction. It is only thus that the widening of the mortise is prevented and the normal arch restored.

From this experience we learn that the proper treatment of fractures, just like many other lesions, is based upon individualization. And this can very seldom be carried out without resorting to application of the Roentgen rays.

VIABILITY OF BACILLUS PESTIS.

By W. J. CALVERT, of St. Louis,

LECTURER ON TROPICAL DISEASES IN THE MEDICAL DEPARTMENT OF WASHINGTON UNIVERSITY, ST. LOUIS, MO.

For this work ordinary slips of writing paper were placed in test tubes and sterilized in autoclave at 120 C., on three successive days, fifteen minutes exposure each day. These slips were then inoculated with a forty-eight-hour culture. The following method was used: Agar slants were employed from which the cultures were scraped and suspended in sterile salt solution in a Petri dish; with sterile forceps the strips of paper were immersed in this suspension and placed in test tubes. Due care was taken to prevent contamination. After the paper had been inoculated cultures were taken from the suspension in the Petri dish to determine its purity at the end of the operation. These cultures were pure. The inoculation was done in an almost air-tight room which had previously been cleaned and washed out with carbolic acid.

In all fifty tubes were prepared on December 3, 1900, and placed in thermostat at 32° to 34° C. Five strips were used for each examination. The slips were placed in bouillon for forty-eight hours. From the bouillon pure cultures were obtained by plating.

On December 15, 1900, five tubes were examined, all of which gave positive results.

On December 20, 1900, five tubes were examined, three of which gave positive results. On December 28 a rat was inoculated with one ooze from one of the cultures recovered after seventeen days in thermostat. Death followed in forty hours. Cultures were recovered at autopsy.

December 31, five tubes examined with four positive results. (Twenty-eight days in thermostat.)

January 6, 1901, five tubes examined with two positive results.

January 11, 1901, five tubes examined with negative results.

January 16, 1901, one positive result. (Forty-four days in thermostat.)

The remaining tubes were lost by some fault in technique while transferring the paper from the dry tube to the bouillon.

Up to the seventeenth day in the thermostat all of the cultures were positive, all on the thirty-seventh day negative, and one positive on the forty-fourth day.

When the experiment was begun it was my intention to inoculate animals with cultures from each positive result, but with one exception it was impossible to obtain either house rats or monkeys.

For exposure to direct light and heat of the sun, tubes were prepared as above and placed in an inclined position on a brick pavement in direct sunlight. Two

tubes were examined, as above described, every fifteen minutes. All of the papers, up to and including those exposed for two hours and forty-five minutes, gave positive results. A rat inoculated with culture obtained after an exposure of two hours and forty-five minutes died in fifty-six hours. Cultures recovered from autopsy. All of the tubes examined after an exposure of three hours were negative.

These experiments show the pest bacillus to be rather more resistant than has ordinarily been believed. If the organism can live forty-four days on paper in a thermostat, it is reasonable to presume that it can live a longer time in a moist, cold, dark oriental room where more suitable culture media than dry paper might be found. This fact may assist in clearing up the origin of successive epidemics after the disease has been introduced into a given locality.

The maintenance of life and virulence after two hours and forty-five minutes exposure on a hot brick pavement to the tropical sun (130° to 140° F.) is worthy of notice. In most cities, especially oriental, there are many outdoor spots on which the sun never shines or for only a few minutes to an hour or so per day. Here the bacilli might live for an undetermined length of time.

3732 Olive street.

LIQUEFIED OXYGEN AND X-RAY TREATMENT OF MALIGNANT GROWTHS.

BY DR. A. CAMPBELL WHITE, of New York.

Liquefied oxygen is a term used in the above title as a substitute for the term liquefied air, because as used in the treatment of malignant growth the liquid air when it reaches the tissues to which it is applied is in reality liquefied oxygen. The reason for this is simple. The liquid air contains nitrogen and oxygen in the same proportions as the air we breathe—*i. e.*, about three parts of nitrogen to one of oxygen, by weight, and four to one by measure. As soon as the liquefied air is exposed to our ordinary air the nitrogen immediately disappears, leaving almost pure liquefied oxygen, because the nitrogen evaporates so much more rapidly.

To prove this rapid evaporation of nitrogen I mention the following simple experiments presented in a demonstration before the American Medical Association at Atlantic City:

If a lighted match is dropped into the liquid immediately after the latter has been poured into a glass, the light will be extinguished. Nitrogen evaporates much more quickly than oxygen, so that after a short time the liquid becomes very rich in oxygen, and if a lighted match should then be dropped into it, it would burn brilliantly, and combustion would be perfect; a lighted cigarette would blaze and be completely burned if dropped into it; even steel is melted in the same way if brought to a white heat before exposing it to the liquid.

Although liquefied oxygen has been applied to great advantage in many forms of skin diseases, chiefly lupus, and for the removal of foreign growths other than malignant, and although the same can be truthfully said for the use of the X-ray, we shall confine the subject exclusively to the use of these remedial agents in their application in malignant disease.

In the early part of the year '98 we began the use of liquefied oxygen in the treatment of skin affections, including malignant and benign growths and ulcerations. Since that time a large number of malignant cases have been treated. Only those cases which were considered inoperable, or cases of recurrence, were treated during the first two years; a few operable cases have been treated since, but most of the latter were so treated because of their refusal to submit to the knife. The treatment for something over a year past has been irregular, owing to our inability to obtain a regular supply of liquefied oxygen.

The difficulty in obtaining a regular supply has been somewhat compensated by the improved methods of keeping or confining it. For the first two years it was necessary to have for a day's supply from five to ten gallons of liquefied air, which had to be carried in a large tin can contained in a larger tin can, the intervening space being filled in with hair felt. This would all evaporate in one day whether used or not.

To-day a glass bulb is used. Within the larger bulb is a smaller one, the intervening space between the two bulbs is a vacuum. The vacuum being a non-conductor of heat, a gallon of liquid air can be kept for two or three weeks.

This bulb is called the "Dewar" bulb, and will prove to be a great benefit to the physician.

The difficulties of application have almost entirely disappeared by the use of more perfected and new instruments. The results obtained in these cases can be summed up by looking at the general effect upon the symptoms usually accompanying malignant disease, and the permanency of relief or recovery.

Facial epitheliomata have been naturally the most frequent form of malignant disease to come under our observation and treatment.

Pain, hemorrhage and discharge being the most disagreeable and frequently unbearable symptoms of this affection (excluding extension), the results of the treatment upon these manifestations is important.

Many cases are free from much pain; most cases have been accompanied by this symptom. In all cases there has been an increase in pain, lasting about one-half hour, and beginning from ten to twenty minutes after the application. This pain is due to the excessive congestion following the freezing of the part affected; with the exception of this pain due to treatment, it has been the universal statement of all patients who have had much pain previous to beginning treatment, that this symptom has troubled them less, or has diminished altogether.

In no case of epitheliomata, after the entire surface has been once treated with liquefied oxygen, has a patient had a sign of hemorrhage, while in some cases this has been a troublesome and grave manifestation of the disease.

The disagreeable and odorous discharge from the ulcer first increases, particularly after the first treatment, then gradually diminishes.

The process of healing takes place after some sloughing has resulted, and does not begin until several treatments have been given.

Small spots of healthy epidermis appear here and there on the surface of the ulcer where and when least expected. At the same time there are given off from the edges, not evenly, but in little out-shoots toward the center, healthy epithelium. The small spots of epithelium and the out-shoots from the edges finally coalesce until the entire surface is covered with good epidermis, somewhat red even beyond the original border of the ulcer, but with a remarkably slight scar. With time the redness disappears almost, if not quite, entirely.

The duration of treatment in these cases, as would be supposed, depends almost entirely upon the extent of tissue involved; but there is a difference in the time required to obtain a good result, which does not seem to depend so much upon the size of the ulcer as upon the resisting power of epitheliomata to the treatment in individual cases.

The treatment can be hurried or can be given more deliberately. The former method requires more severe application at each sitting, and is sure to be accompanied by a simple but severe inflammation of the surrounding tissues. The more deliberate method is undoubtedly the better method, giving better results, less discomfort to patients, and the object should be to avoid surrounding inflammation.

Liquefied oxygen has been given a fair trial on many cases of scirrhus carcinomata of breast, which have either been operated upon followed by recurrence or were so far advanced as to preclude operative interference when first seen.

Every physician familiar with these cases realizes that hemorrhage is a frequent and most dangerous symptom in almost every case. When the statement is made that in not one of these cases has there been the slightest hemorrhage after the second or third application, it sounds incredible, nevertheless this is positively so. One case can be cited of a woman fifty years old, who had a large scirrhus cancer of breast, and had been having hemorrhages, some very severe, for over one year when she came under observation. It is now two years since treatment was commenced, the patient has not had one hemorrhage since the first application of liquefied oxygen.

The odor in these cases is characteristic and extremely disagreeable to the patient, not to mention others obliged to come in contact with the sufferer. In the above case cited this odor was very decided and disappeared entirely after three months' treatment.

Descriptions of the X-ray, the technique employed in its use, and its therapeutical value have been so thoroughly exploited during the past year, that I can add no information.

About one year ago I became sufficiently impressed by the wonderful results claimed for the X-ray in the class of cases we were interested in to investigate and compare the results obtained with those obtained by liquefied oxygen.

Dr. S. G. Tracy, who has been using the X-ray since its inception, has associated himself with me in work on malignant and other skin diseases, thus giving an excellent opportunity for observation as to the relative advantages of the two treatments.

In the treatment of superficial epitheliomata I would rather prefer the use of liquefied oxygen.

The result of treatment is purely local, and we know exactly what is being done, the final result being equal to if not better than that obtained by the ray.

In the treatment of scirrhus cancer of the breast where ulceration has not taken place, liquefied oxygen is excluded, while the ray may prove even more than beneficial; whereas when ulceration has taken place followed by hemorrhages and excessive odor, liquefied air is indicated, for I have noticed that the ray had not much if any early effect upon these two important symptoms.

The pain following the use of liquefied air to excess, I believe is more than

offset by the extreme prostration so frequently following a prolonged X-ray exposure.

Something which must always be taken into consideration in determining which treatment shall be used in a given case is the "Roentgen dermatitis," which is so obstinate in its treatment, and sometimes so extensive as to go on to ulceration. This of course is not true of liquefied oxygen, although there may be a simple inflammation around the edges of the parts to which the air is applied. This inflammation will always disappear in two or three days, and is not painful or accompanied by elevation of temperature or increase of pulse.

No doubt every operator of the X-ray has had cases of large scirrhus carcinoma of breast where the destruction of tissue is not sufficiently rapid to meet the situation, and he resorts to arsenic and other caustic measures as an adjunct to hasten matters. Here is where liquefied oxygen is indicated above all other measures, for liquefied oxygen is the most rapid and safest caustic, when used for that purpose; no systemic effect can be obtained by liquefied oxygen, which cannot be said of the other caustics used for this purpose.

In the treatment of sarcoma and internal malignant diseases, liquefied oxygen is excluded. Here the X-ray is certainly indicated.

It is extremely unfortunate that the commercial contests during the past year or two in liquid air companies have prevented a more general use of liquid air in these malignant cases which have been crying for aid as never before. A liquid air plant is being established at the present time in Los Angeles, California, also one in New York City, the products of which are to be used for medical and surgical purposes only.

After studying carefully the results obtained by these two methods, liquefied oxygen and the X-ray, in the treatment of malignant diseases, I am led to believe there are certain cases in which liquefied oxygen is the preferable treatment, and in certain other cases, as previously indicated, the X-ray is to be desired, but in most cases an intelligent combination of the two methods will accomplish more than either alone, and that in this combination we have the ideal local treatment of to-day for malignant diseases.

537 Fifth Avenue.

CLINICAL REPORT.

REPORT OF A CASE OF SYRINGOMYELIA.

By M. W. HOGE, M. D., of St. Louis.

The patient was kindly referred to me by Dr. Mudd on July 13, 1902, on account of a paralysis of the deltoid which had come on rather rapidly a few days before.

The patient is a man, aged about forty-four, of Irish nationality, by occupation a painter. There is no history of hereditary diseases in the family, or of previous serious illness on the part of the patient.

Several years ago, however, he had some inflammatory trouble of the subcutaneous tissues over the left scapula, infrascapular fossa, which terminated in abscess formation and the destruction of the greater part of the infrascapular muscle.

He uses tobacco and alcohol, the latter at times to excess.

He gives a history of having since childhood a sensation of numbness over the left side of the neck, extending slightly onto the inferior maxilla. About twenty years ago he noticed beginning wasting of the small muscles of the left hand, which has increased up to the present time. On examination the patient is seen to have a general muscular development which is rather above the average, with the exceptions above mentioned. All of the intrinsic muscles of the left hand are atrophied, and to such an extent that the patient has but little use of this member. The appearance of the hand is that observed in the Aran-Duchenne atrophy. The deltoid paralysis is not complete, being most pronounced in the clavicular portion of the muscle. The patient is able to voluntarily contract it, but not to a degree sufficient to raise the arm from the side. His pupils are equal and react normally. His station is good. The two sides of the face are contracted equally. The tendon reflexes are all increased except the scapulo-humeral and the wrist-jerk of the left side. The deltoid responds well to both galvanic and faradic currents, and without reaction of degeneration. In the intrinsic muscles of the left hand but feeble response can be obtained. Tactile sense is apparently normal over the whole body. There is, however, distinctly diminished perception of pain and diminution or absence of perception of temperature over two large areas. The one extends from the lower border of the left inferior maxilla down the left side of the neck, and over the left half of the chest to about the fourth rib anteriorly, and posteriorly to the spine of the scapula. Medially it extends just to the median line of the body both anteriorly and posteriorly. It also extends over the left shoulder, and the whole of the left arm and hand.

The second region of disturbed sensation is on the right side and is bounded above by a line drawn horizontally around the body at about the level of the seventh rib. It also extends on the trunk just to the median line both anteriorly and posteriorly. Behind it reaches downward to the lower border of the gluteal muscles. In front it extends down the anterior aspect of the thigh, gradually fading out near the knee. There have been no vesical or rectal symptoms.

The history and symptoms of this case leave room for no other diagnosis than that of syringomyelia, the deltoid paralysis being probably due to a

small hemorrhage in the neighborhood of those cells of the anterior horn of the cord from which the motor fibers of the circumflex nerve arise. This complication is of not infrequent occurrence in syringomyelia.

Since the above date the deltoid paralysis has considerably improved, showing that if such was its origin, the implication of the motor cells was not of a destructive character, but more probably pressure from an effusion near them. The atrophy is in muscles supplied by the terminal filaments of the median and ulnar nerves, whose cells of origin are in the gray matter of the cord from its fifth cervical to its first dorsal segment. The boundaries of the area of sensory disturbance on the left side indicate an implication of the sensory tracts of the cord from the second cervical to the fourth dorsal segment. The area of anesthesia on the right side probably indicates a second lesion in the sensory tracts of this side at about the eighth dorsal segment. Not necessarily, however. In the so-called Brown-Sequard paralysis we observe a transverse lesion of a lateral half of the cord producing an anesthesia of the opposite half of the body below the lesion; to explain which is invoked the theory of a decussation of the sensory fibers soon after their entrance through the posterior roots. If this supposed decussation be a fact, then the lower area of anesthesia might be due to an implication of its fibers in the lesion in the cervical region of the opposite side, as they ascend through the sensory tracts of that region.

We must remember, however, that this spinal decussation of the sensory fibers is only an hypothesis, which has no basis in histological observation and is not universally accepted (*vid.* Long; *Les Voies Centrales de la Sensibilite Generale*, 1899).

The lesion of syringomyelia, however, is often of considerable longitudinal and irregular lateral extent, and so may produce motor and sensory disturbances of very irregular distribution. This case is an example of the slowness with which the disease often progresses, since it is now probably more than thirty years since the first symptom was observed. Probably the greatest danger to the patient for the near future is that of its extension upward, so as to involve the respiratory center in the medulla.

3502 Franklin Avenue.

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Warsaw, Russia.

JULIUS SCHNITZLER, M. D.,
Docent of Surgery, University of Vienna, Aus-
tria; Surgeon-in-Chief, Franz Joseph Hospital,
Vienna.

HEINZ WOHLGEMUTH, M. D.,
Berlin, Germany.

Address all communications to the INTERSTATE MEDICAL JOURNAL, LINMAR BLDG., ST. LOUIS, MO.

EDITORIAL COMMENT.

THE INTERSTATE ABSTRACTS FOR 1902.

We do not wish to undervalue the department of a journal which consists of a few complete original articles. Such articles have their fixed place and are of undoubted value especially to the scientific original worker. He, as a matter of course, must have the statistics, measurements, etc., which an abstract, from its very nature, cannot contain. In calling attention, however, to what has been accomplished in the way of abstracting the medical literature of the past year, the editors of the INTERSTATE point with a feeling of pride to our index of Vol. IX. The list of abstracts which it contains shows the reader substantially the progress that has been made in every field, as far as detailed, in four languages. We have abstracted seventy-four foreign publications, not including those on the shelves of the St. Louis Medical Library to which the JOURNAL subscribes for all its editors. In addition to this a large number of foreign monographs have received attention, at the same time we have had access to practically every special and general journal published in the English language as well as a large number of German and French books on special subjects.

Twelve men, all of them specialists, have been richly supplied by the INTERSTATE with medical literature from Germany, France, England, America, Austria, Italy, Belgium, Russia and Japan. In consequence it has been possi-

ble for this corps of workers to furnish in each number a line of abstracts which could not be secured under any less favorable combination of circumstances. It has been our aim to give special attention to the material which our subscribers do not have access to, a material which it is not natural to suppose that most of them could read if they did have, for it must be admitted that our busy practitioners, no matter if they had the inclination, are scarcely possessed of the training which enables them to read German, French and Italian. We have for this reason purposely neglected, to a certain extent, the American journals to which all have access. In substantiation of this we ask only a comparison with the abstracts found in the average American medical publication.

Enough for quantity. As to the quality of our work in this particular we have certain definite claims to make. The articles which we have reviewed have not been merely skimmed or simply the authors' conclusions reproduced. Our work in this line has not been paid for by the yard, so to speak, or done mechanically by men paid to abstract this or that entire journal irrespective of the interest which its contents may or may not have had for him. With us, on the other hand, a specialist is in charge of each department, and in doing his work reads his articles for his own instruction and in writing his abstracts does it with the exercise of a certain discrimination which cannot be expected from a man who does the same work after the manner of a clerk or bookkeeper.

In short, it has been our aim to give our subscribers, most of whom are general practitioners, the greatest possible amount of recent general information, and we trust that their appreciation of our results justifies the efforts which we have made.

BUBONIC PLAGUE IN THE UNITED STATES.

It is high time that the United States Government instituted some radical measures for the extermination of bubonic plague in California. The time has long passed to investigate whether plague does or does not exist in this country, and the prevention and eradication of the pest no longer admit of procrastination. It is amusing, yet true, that while our medical students are being instructed in the science of hygiene, and in the prevention of infectious and contagious diseases, that one of the worst scourges known to medical science is being allowed to propagate in our own country. The problem is not difficult of solution. Our institutions are prepared at all times, when the health of a community is at stake, not only for legislative measures, but for their swift and sure execution. The means by which the plague is transmitted, and the manner in which it has been successfully exterminated in the East stand as shining examples for us, and likewise as a reprehensible evidence of the neglect in the case of California. Reports show that there have been thirty-six cases since January 1st, all but one of which ended fatally. The success of the measures taken in Japan demonstrate what can be done. Isolation in our case will not be sufficient. Unless present measures prove speedily efficient, it may be found necessary to eventually exterminate the whole of Chinatown in San Francisco, an environment which reeks with filth and with catacombs of disease and contagion. The seed has been successfully implanted, and the *fons origo* is now in San Francisco rather than elsewhere. Experiments have shown that the vitality of the plague bacillus in the bodies of those who have died from the disease, persists from twenty-five to thirty days (Yokote, *Centralblatt fuer Bakteriologie*, No. 23, p. 1030,

1898). Therefore, there is a double responsibility. Wyman (Document No. 2165, Treasury Department, Washington, 1900) claimed that bubonic plague can be easily controlled by careful isolation and sanitation. There is no excuse for California. The state has laid itself bare to the severest rebuke and condemnation, which can only be effaced by speedy and radical measures.

URETERAL CATHETERISM AND SEGREGATION.

It is owing to the difficulty and the sometimes apparent impossibility of catheterizing the ureters, and to the great skill and ability necessary to do it, that has made surgeons endeavor to find other means of obtaining the urine separately from each ureter. Out of these considerations has grown the segregator. Like other instruments and methods of operating, no one will answer for all purposes. There are cases where ureteral catheterism is the procedure of choice, and, undoubtedly, there are others where the segregator is indispensable. So that it seems that both methods will have a place in the practice of surgeons. Where it is impossible to catheterize the ureters by one or the other of the several instruments for that purpose, the segregator is of necessity. Where one wishes to differentiate ureteral from kidney disease, as Lewis suggests, for instance, the catheter is of necessity. But in a large proportion of cases the segregator is sufficient, and, as it is much more simple both for the surgeon and the patient, it will, no doubt, be extensively employed. Recently Luys and Cathelin have simplified the process very much by constructing instruments which act on the principle of dividing the bladder into halves, without making a water-shed separation, thus rendering the procedure much less painful and disagreeable to the patient. That the specialist should be capable of employing either or both goes without saying. So that the advocate of ureter catheterism or segregation to the exclusion the one of the other, should rather be considered a step backwards.

MEDICAL AND SURGICAL PROGRESS.

INTERNAL MEDICINE.

IN CHARGE OF

JESSE S. MYER, M. D.

A Case of Adams-Stokes Disease.—LEWY, Berlin (*Zeitschrift fuer Klinische Medizin*, vol. xlvii, part 3 and 4).—The case presented all the typical symptoms of this rare disease, which is characterized by a diminution and occasional ceasing of the heart's action, cold, clammy skin, loss of consciousness, mydriasis, movements of the eyes, tonic and clonic spasms of the voluntary muscles of the extremities, grating of the teeth, Cheyne-Stokes respiration, and frequent outcries. This case presented one phenomenon not mentioned in the reports of other cases, and that is outbreaks of perspiration following each paroxysm.

Depending upon the severity of the attacks, the pulse would cease for from five to eighty seconds, and during these periods no action of the heart could be detected by ordinary methods. There was no venous pulse in the jugulars. It is worthy of mention, too, that during the intervals of even one minute, when there was no demonstrable cardiac action, there was no increase in the area of heart dullness. In spite of the interruption of the cerebral circulation for comparatively long periods of time, consciousness returned very promptly upon the renewal of the circulation. In this case the patient labored under the impression that he had dreams during the periods of unconsciousness. He was unable, however, to relate them.

The cause of the bradycardia must lie in the nervous apparatus of the heart. It must come about either through some stimulation of the inhibitory nerve, the vagus, or through a paralysis of the augmentatory nerves, the sympathetic. The cold skin and mydriasis speak against the latter. The question arises as to the location of this stimulus, whether in the medulla, in the peripheral branches of the vagus, or in its distribution in the heart muscles itself.

The presence in each attack of profuse perspiration, and the coldness of the skin would seem to indicate that the irritation lies in the medulla oblongata, where the vagus center, the vaso-constrictor center, and that of perspiration are in close proximity.

Atropin was used in this case because it is known to exert a specific paralyzing influence upon the vagus. While it seemed to control the perspiration, it had practically no influence upon the action of the heart.

Concerning the Fate of Carbohydrates in the Intestines of Infants.—HERDENIUS, Upsala (*Archiv. fuer Verdauungs-Krankheiten*, vol. viii, part 4 and 5).—After Zweifel and Korowin showed that in the new-born, diastatic ferment was produced only by the parotid gland, and that the pancreatic diastase was not present until the second month, it seemed irrational, theoretically at any rate, to use carbohydrates in the nourishment of younger infants. The author's experiments were conducted with a view of clearing up the existing inconsistencies.

Babes were fed on milk-carbohydrate mixtures. Through the determination of the acidity of the feces of infants fed on simple milk diet, and on a diet rich in carbohydrates, it was possible to determine, approximately at any rate, the influence of carbohydrates on the acidity of the feces. Through exact sugar determinations, etc., the author was enabled to arrive at exact results. Various forms of the carbohydrates were utilized.

These experiments led to the conclusions that (1) in children several months old, fed on diet rich in carbohydrates, a small quantity was found in the dried feces, and that the feces contained less acid in these than in younger infants, viz., two or three months old; (2) a child two months old can gradually develop a tolerance for carbohydrates; (3) nourishment consisting of the simple flours in general resulted in the finding of less carbohydrates and less acid in the stools than did the nourishment consisting of complicated carbohydrate mixtures, such as Zwieback, etc.

The Diagnostic Significance of the Catheterization of the Ureters.—ADRIAN, Strassburg (*Centralblatt fuer die Grenzgebiete der Medizin und Chirurgie*, November 8, 1902).—This most thorough review of the above subject will continue through two or more numbers. In this article, 133 literature references are cited with the promise of more in the following papers.

The catheterization of the ureters is dealt with (1) as a diagnostic aid in the general determination of an affection of the urinary system; (2) for the determination of the position of the lesion in the urinary apparatus; (3) to determine which kidney is involved, etc., etc.

When completed, this article will present a most exhaustive review of the subject in hand, both with reference to its diagnostic and therapeutic significance.

Parenchymatous Gastric Hemorrhages.—MOSER, Rostock (*Muenchener Medizinische Wochenschrift*, November 4, 1902) reports a case of hematemesis in a male, forty-one years of age. The vomiting occurred periodically, and was accompanied by severe pain in the epigastrium. There were no marked symptoms pointing to round ulcer or carcinoma. The gastric contents contained HCl, but no lactic acid. In view of the rapid decline, an exploratory operation was done. There were no bleeding points or thickening demonstrable. Gastroenterostomy was done. The patient died three days later. The autopsy revealed hypertrophy of the musculatur, and near the pylorus four small hemorrhagic points not larger than pin-heads.

The author does not attempt to give an unqualified explanation for the hemorrhage. He calls attention, however, to the experiments of Schiff and Elstein in which the gastric hemorrhages were produced through injury and irritation of certain portions of the brain. It is well, therefore, to keep in mind the possibility of the cerebral origin of such hemorrhages.

Gastric hemorrhages have been noted in appendicitis, hypertrophy of the spleen, in cholelithiasis, after operations on the gall-bladder, after herniotomy, in incarcerated hernia, in aneurisms and varicosities of the gastric vessels, in acute and chronic gastritis, etc., etc. None of these, however, could account for the bleeding in this case.

The So-Called Scarlatiniform Exanthema Following the Use of Serum in Diphtheria.—LEINER, Vienna (*Wiener Klinische Wochenschrift*, No. 43, 1902).—Since serum therapy has been employed in diphtheria a series of skin eruptions have been noted, due to the action of foreign serum in the blood and not to the anti-toxine itself. The author maintains that the cases of scarlatiniform serum exanthemata were without doubt cases of true scarlatina, and bases this opinion upon the following observations:

1. The so-called scarlatiniform erythema occurs in the first five days after the injection, which is not true of the exanthemata due to other serums.
2. The cases were followed by typical lamellated scaling.
3. Following these exanthemata glomerulo-nephritis was frequently observed.
4. The eruptions were contracted by other children in the same room.

5. The contagion was very tenacious. Isolation and formalin disinfection could not always prevent a new outbreak.

6. The eruption and the "peeling" often started from the point of injection.

In one case there developed, aside from the scarlet eruption, a typical serum-urticaria.

Angio-sclerosis of the Arteries of the Intestines.—ORTNER, Vienna (*Wiener Klinische Wochenschrift*, No. 44, 1902) reports a case presenting periodical attacks consisting of burning pains in the abdomen, distention of the same, difficulty in breathing, etc. These attacks occurred at intervals of three to twelve months. In the interval the physical examination was practically negative; during the attack there was marked distention of the abdomen, sensitiveness, dyspnea, cyanosis, etc. Patient died one and one-half days after an exploratory operation from septic peritonitis.

The autopsy revealed marked arterio-sclerosis of the aorta from the celiac axis downward and of the superior and inferior mesenteric arteries even into the smallest branches.

The Diazo Reaction in Pulmonary Tuberculosis.—RAOUL DE BOISSIERE, Edinburgh (*British Medical Journal*, November 15, 1902).—The author reports the results of the examination of the urine for the Diazo reaction of all of the consumptives admitted to the Victoria Hospital during the past year. He found it positive in a comparatively small number of cases, about eighteen out of one hundred and thirty. When present at all it was usually in cases with definite pyrexia. In eighteen positive cases there was but one exception to this rule. He found it associated with an advanced stage of the disease.

Though the reaction is present in a large proportion of the very advanced stages, it is absent in a considerable number.

In forty-three well-advanced cases, with extensive bilateral consolidation, crepitation, large rales, etc., the result was positive in eighteen, and negative in twenty-five. Some of the negative cases were examined a short time before death, and yet it was impossible to obtain a positive result. Some observers publish quite different reports. Bolli, for instance, claims to have found the reaction constantly in the second and third stages of the disease, and in many early cases. The author attributes the widely different results to lack of attention to the details necessary in applying the test. The presence of the reaction has a prognostic significance, being an indication of gravity. Of sixteen positive results among one hundred cases, thirteen are already dead, one is dying, and two are much improved. On the other hand, of the eighteen very advanced cases that gave negative results, only four have died and the rest are greatly improved.

Two Cases of Carcinoma of the Esophagus Presenting the Clinical Picture of Aneurysm of the Aorta.—KUCKEIN, Koenigsberg (*Deutsche Medicinische Wochenschrift*, November 6, 1902).—In both of these cases the symptoms which seemed to point so clearly to aneurysm of the aorta were due to carcinoma of the esophagus. The tumors had their origin from the anterior wall of the esophagus in its middle portion. They extended into the mediastinum, thus producing little or no pressure upon the esophagus. The lumen of the esophagus remained open, thus preventing the development of the cardinal symptom of esophagus carcinoma, viz., dysphagia. The posterior wall of the esophagus was entirely free. The tumor in its growth in the mediastinum produced pain, through pressure exerted upon nerves of sensation; the left recurrent laryngeal nerve was destroyed by the growth, producing hoarseness; dyspnea was produced through the pressure upon the trachea in the region of the bifurcation, etc.

The pulsation of the tumor that was so clearly seen on the radiograph was transmitted from the underlying aorta.

Actinomycosis Hominis in America, with Report of Six Cases.—ERVING, Baltimore (*Bulletin of the Johns Hopkins Hospital*, November, 1902), describes six cases of actinomycosis in human beings and sums up the American literature on the subject, covering about one hundred cases.

The cases are scattered widely throughout the country; though most of them are reported from the large medical centers. Seventy-two were males, twenty-three females, and in five instances the sex was not mentioned.

The youngest case was in a child of six years, the oldest in a man of seventy. The disease occurs, however, most frequently in middle life.

About one-fifth of the cases, in which occupation is mentioned, were farmers. The disease frequently becomes chronic.

Frequently there is no definite history of infection, though most of the cases are doubtless contracted from animals. The clinical characteristics vary greatly with the region of the body involved; the cervico-facial type are characterized by pain and swelling, and are frequently mistaken for toothache; in the thoracic forms the first symptoms are those of bronchitis or pleurisy; the abdominal cases frequently resemble appendicitis. The diagnosis is positive only when the ray fungus is found.

Extension frequently occurs by contiguity of tissue, or through transmission through the blood.

Recovery occurred in forty-five cases, improvement in fourteen, and death in thirty-two.

Forty-three cases were treated surgically; in thirty-four both surgical interference and the iodides were used; in nine cases potassium iodide was administered, without surgical interference, and in eleven cases the treatment is not mentioned.

The iodides probably have no specific action on the ray fungus. Its use is generally recommended in connection with free incision and drainage of the abscesses, and probably aids in the elimination of the fungus.

SURGERY.

IN CHARGE OF

WILLARD BARTLETT, M. D.

Histological and Experimental Contributions to the Study of the Incision and Suture of Abdominal Wounds.—NEHRKRON (*Beitraege zur Klinischen Chirurgie*, Band 34).—The author has sought to determine by animal experiments and by study of excised laparotomy wounds, the best place to make an incision and the best means of suturing the same. He also reviews at length the older arguments for and against incisions through the linea alba and those through the rectus muscle, as well as the various lines of incision in the flank. Although he does not state it expressly, it is quite clear that one object of the article is to defend the obsolete through-and-through suture, because the same is still used in Professor Czerney's clinic, from which institution this article emanates. After discussing at length the *pros* and *cons* of layer suture and through-and-through suture, the author comes to the conclusion that the patient's best interests are subserved by a combination of the two, for only by this means can the various layers be accurately approximated, and at the same time all dead spaces be obliterated. Sections which were made through fifteen excised laparotomy wounds, ranging in age from one day to six weeks, showed some interesting features. The suture in layers gave, of course, a better approximation of each layer than did the through-and-through, but dead spaces led to trouble in more instances

than one. It was found that the fasciæ healed best when the cut edges were brought together without any overlapping, and, in fact, that there was in reality an actual regeneration of these tissues instead of mere scar formation. He next made thirty operations upon dogs' abdomens and then excised the scars and made sections from the same. There was not much of interest learned from these studies in addition to what has been stated above. He merely succeeded in confirming the opinions already stated.

Researches in General Anesthesia with Ethylchloride.—GIRARD (*Bulletins et Memoires de la Societe de Chirurgie, de Paris*, No. 30, 1902).—The symptoms of this variety of anesthesia are very much the same as those of chloroform anesthesia, though they take place and disappear more rapidly. The author has performed a large number of experiments on animals and found that the dog is hardly affected by the drug, while the cat is profoundly influenced. For the human there is decidedly more danger than clinicians have supposed if the dose be large or the use of the drug be at all prolonged. It is surely possible in the human for the drug to produce complete inhibition of the vagus nerve. In choosing an anesthetic it must be said that none of them is absolutely harmless, so it resolves itself into a use of the least harmful of them; and, indeed, one can say that the drug under discussion is comparatively safe, though it is far from being absolutely so. It has a cumulative effect and may produce sudden death. The maximum dose for an adult is five to six c.c., and it should not be used longer than five minutes. It is splendid for a short operation and given before chloroform diminishes the chance of syncope, and when used with ether enables one to get along without the immense dose required in the initial stages. The anesthesia should be complete in all particulars within two minutes.

Eight Hundred Radical Bassini Operations and Their Definite Results.—GOLDNER (*Archiv fuer Klin. Chir.*, Band 68, Heft 1).—This remarkable number of eight hundred operations was performed in five years at Professor Alberts' clinic, in Vienna, and it may be considered a better test for the method than a great many young surgeons in the clinic did the operations, than could have been the case had they all been performed by the celebrated head of the clinic himself. Two years have passed since any operation herein described and some of them are more than six years old. It was possible for the author to make a personal investigation of four hundred and sixty-six of these cases, and he found in 7.5 per cent. only after-disturbance of any sort whatsoever. An actual recurrence took place in but 4.9 per cent. In fifteen recurrences there was a connection with the spermatic cord in but nine of them, the opening in the others being elsewhere. The greatest amount of tension on the sutures is, of course, at the lowest angle of the wound, and there the most recurrences were found as a matter of course. The chief indication for operation is expressed in the patient's own wish to be operated on, no matter what sort the hernia. However, the author does not advise an operation if the patient be above sixty, on account of the atrophic condition of his muscles. On the other hand, he will not operate under three years of age, or in cases of complete eversion. A generous portion of the article is devoted to the subject of local anesthesia, which has been very much used in this clinic, and which is highly favored, although in some cases the patients press so hard that it is impossible to tie the sutures. The author advises local anesthesia by all means where there is any contraindication to the general use of the drug. If the muscles are atrophic, the rectus is brought down with the lower two sutures in every case and silk is used for the muscle suture as well as for the aponeurosis. To prevent the appearance of crural hernia, after an inguinal operation, it is advised to suture Poupart's ligament to the periosteum of the ascending ramus of the pubis. One must also be very careful about avoiding a median lipoma, for behind it is often found the bladder. Injury to the

round ligament in the female has been found to give no bad result whatsoever. The patients sit up on the twelfth day and leave the hospital on the fourteenth in Vienna, unless there is some wound or other complication. The sutures in the aponeurosis may slough out without a recurrence, but if those in the muscle give way a recurrence is unavoidable. A varicocele has been produced by the operation, and in all the series of eight hundred but three patients died: one from chloroform and two others from embolism of the pulmonary artery.

Ano-Rctal Actinomycosis—(*Revue de Chirurgie*, No. 8, 1902).—It is little short of remarkable to notice the number of errors in diagnosis which have been committed in this connection, everything else having been considered before the possibility of actinomycosis has been taken into account. There are two ways for the germs to be introduced: one through the digestive apparatus and the other directly from without through the skin. It is sure that the different portions of the digestive apparatus are much more frequently involved in the manner under discussion than is generally supposed. When the infection is through the skin the superficial involvement may be great, but the deep parts remain almost healthy, the inverse being the case when the disease is of a descending origin. This latter method of infection may occur without there being any trace of actinomycosis anywhere from the lips downward, and this state of affairs of course renders the diagnosis more difficult. It is also noteworthy that long stretches of tissue may be involved in the transmission of this disease from a primary to a secondary focus. In the primary form of the disease the original focus may resemble a neoplasm or an ordinary inflamed area. The peri-rectal involvement may be as extensive as in any other form of inflammatory disease in this situation. The prostate, the bladder, or the peritoneum may become diseased secondarily. Of course the individual may be affected in one of two ways: either by compression of the rectum through the mass situated beside it, or else by suppuration into it when the mass has broken down. If taken early the disease gives a favorable prognosis, the treatment being free incision and the use of large doses of iodide of potassium. The diagnosis is made certain only by finding of the characteristic granules.

Congenital Hernia in Children and Its Radical Treatment.—KREMM (*Centralblatt fuer Chir.*, No. 46, 1902).—The author has not found a complete spermatic cord in any such case, but has noted that its components are invariably spread out over the sac. He refers at length to the well-known adhesions around such structures and gives his methods of dealing with the same in the disposal of the sac. It is, as is well known, often extremely difficult to separate this latter from the various structures in the vicinity without tearing it or injuring them. Hence Kremm, after ligating the sac, exposes it all the way to the testicle, then splits it and sews it around the elements of the cord, thus bringing the serous surface to an outward instead of an inward exposure.

The Definite Results of the Bassini Operation in Inguinal Hernia.—MATANOWITSCH (*Beitraege zur Klinischen Chirurgie*, Band 34).—Herein are expressed the results which have been obtained in the Heidelberg clinic from 1895 to 1900. As an indication for operation it is considered enough that a patient wishes to be free from his rupture no matter what its character, a statement which one finds borne out nowadays in the reports of many first-class surgeons. The technique as herein considered is slightly different from the original. Czerney does not put any of his stitches through the rectus muscle or its sheath and, instead of using silk, as Bassini directs, he uses sublimate catgut. Great weight is laid upon the nutrition of the aponeurosis, and to this end the author directs that the subcutaneous flap be not dissected from it, that the stitches be put very close to

the edge and not tied too tightly. The cases under consideration were seen from two to six years after the operation, consequently the test must be considered a fair one. In one hundred and seven instances there were but three actual recurrences; and strange to say among the cases that suppurated there was not a single recurrence. This is explained by the fact that the stitches in the muscle all held and this lower layer was enough to protect the abdominal wall. This speaks, in the author's estimation, strongly in favor of the Bassini operation when compared with Kocher's method, since in the latter method, there being but one row of stitches beneath the skin, suppuration loosening them would necessarily lead to the defeat of the surgeon's original plan.

THERAPEUTICS.

IN CHARGE OF

ALBERT E. TAUSSIG, M. D.

On the Action of Fluid Extract of Cactus Grandiflorus.—T. v. ZELENSKI (*Klin. Therap. Wochenschr.*, No. 22, 1902).—There can be no question that digitalis leaves surpass all other drugs used in disturbances of the circulatory system, in respect to reliability and intensity of action. Nevertheless, we cannot always make use of this remedy either because it produces anorexia, nausea and vomiting in many cases, or because the cardiac condition itself contraindicates its use. The chief of these contraindications are: (1) Fatty or fibrous degeneration of the myocardium; (2) an abnormally slow cardiac action; (3) marked arteriosclerosis, and (4) lesions of the aortic valves, though the use of digitalis in the last group of cases has of late again become a subject of controversy. Moreover, even in those cases in which we are using digitalis successfully it is necessary to have other cardiac stimulants for use during those interruptions in the administration of digitalis that are so essential. The number of those other cardiac stimulants is considerable, but none quite serves the purpose. The most frequently used is strophanthus, both on account of its rapid effect and because of its lack of cumulative action. Its unpleasant taste, however, often produces a nausea that greatly limits the usefulness of the drug, the more so as its administration is often followed by digestive disturbance: vomiting and severe diarrhea. Sometimes it has a deleterious action upon the kidneys, producing an albuminuria, and is, therefore, absolutely contraindicated in cardiac cases with renal lesions. The other substitutes for digitalis—*adonis vernalis*, *spartein*, *convallaria majalis*, *coronilla*, *erythrophleum chloride*, *oleander*, etc.—are far from being satisfactory as regards constancy and intensity of action.

The writer is one of the first German clinicians carefully to test the fluid extract of *cactus grandiflorus*, which for some years has found wide use both in England and America. His observations lead him to the following conclusions. In none of his cases did he note any digestive disturbance, certainly never any vomiting. In one of his cases, for experimental purposes, *tr. strophanthi* was substituted for the cactus during one day; the patient promptly responded with violent attacks of vomiting that lasted two days, and absolutely prevented the further use of *strophanthus*. Vertigo and insomnia were never observed during the administration of cactus. Even after long-continued use of large doses of the drug, there were no untoward symptoms, showing that cactus has no cumulative action. In one case very large doses (eighty-five drops four times daily) were given for more than a month without a trace of intoxication. Under the influence of the drug the pulse becomes somewhat more rapid and considerably stronger and of better volume. The author took a large number of sphygmo-

graphic tracings, and, except in cases of aortic insufficiency, where the pulse wave is always high, found that the height of the pulse wave was markedly increased after the use of cactus. The drug apparently has no direct influence for good or evil upon respiration itself. Cactus never causes renal irritation, but neither has it any diuretic properties.

The best results were obtained in cases of uncompensated aortic lesions. In this respect the writer's observations agree with those of Myers and Wilcox, who found cactus almost as distinctly a specific in aortic lesions as digitalis is in those of the mitral valve. The patients who had had all the signs of aortic incompetence—great dyspnea, arrhythmia, edema of the extremities and ascites—left the hospital, after a sufficient course of treatment by means of cactus extract, with a greatly improved cardiac action and no trace of edema. The recession of the cardiac dilatation could progressively be demonstrated by means of percussion. In mitral affections the results of cactus medication were much less satisfactory. The dyspnea grew less for a time, the renal functions improved, but a permanent improvement of the cardiac action could not be obtained by means of exclusive cactus medication. On the other hand, the drug acted very well, indeed, during the intermissions between successive courses of digitalis.

The writer obtained good results in cases of chronic pleuritic exudates in which the pulse was weak and the cardiac sounds feeble. The excretion of urine was increased, the pulse improved and resorption of the exudate hastened. In the course of infectious diseases, also, cactus was found serviceable.

The writer uses much higher doses than are usually prescribed. The usual dose of the fluid extract, five to fifteen drops three times daily, is much too small. At least thirty drops should be given three times daily, and even much larger doses are quite free from danger. The taste of the fluid extract is not unpleasant: the drug may be given in a little water or wine. Its active principle has not yet been isolated.

The Use of Incandescent Electric Light Upon Infectious Diseases.—KREBS (*Ther. der Gegenwart*, 1902; *Centralbl. f. d. ges. Therap.*, 1902, No. 10).—Krebs denies the beneficial influence of incandescent light upon bacterial diseases as described by Gebhardt and Aufrecht. Light does, to be sure, kill gelatine or agar cultures of all bacteria, but within the organism this process does not take place. Krebs infected mice and guinea-pigs with anthrax, and in keeping some in the dark, exposed others to a constant strong light. The latter lived no longer than the former.

Intravenous Injections of Oxygen.—MANIANI (*Gazz. degli ospedali; Centralbl. f. d. ges. Therap.*, 1902, No. 10).—Baccelli was the first who administered drugs in heroic doses intravenously, and also the first to use oxygen inhalation at the death-bed of Victor Emanuel. Gaertner first proved that large doses of oxygen could be administered intravenously to a dog without ill-results, and the writer has continued his experiments. Having found that 10 c.c. of oxygen could be injected into the veins of a dog weighing 5 kg., and 30 c.c. into one weighing 10 kg. without detriment, he investigated the effect of still larger doses. Into the femoral vein of a large dog weighing 14 kg. three liters of oxygen were slowly injected in the course of three hours. It was only after the third liter had been entirely injected that symptoms of embolism, to which the dog succumbed, showed themselves. He reports the case of a man who was brought to the hospital apparently moribund of pulmonary tuberculosis. After an injection of 200 c.c. of oxygen into the dorsal vein of the right foot the patient emerged from his collapse and spent a comfortable night. He died the next day, however, and at the autopsy nothing suggesting embolism was found. The rationale of the method is that when used in cases of deficient air-supply, whether due to pulmonary consolidation, stenosis of the upper air-passages or sluggish circulation, the red

blood corpuscles being poorly supplied with oxygen, absorb that gas greedily. It is essential to make the injection very slowly and into some vein far distant from the heart that the venous blood may have ample time to absorb the oxygen. While the procedure has as yet been insufficiently tested, it promises to be of great value in cases of cyanosis where what we desire is to tide the body over some temporary crisis.

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

R. B. H. GRADWOHL, M. D.

Cultivation of the Lepra Bacillus.—G. VAN HOUTUM (*Journal of Pathology and Bacteriology*, September, 1902).—This writer reports success in cultivating the bacillus lepræ. The medium was made of one-third beef broth and two-thirds fish broth. At 36° C. there occurs a general turbidity and the collection of a small, viscid, coherent deposit at the bottom of the tube. The bacillus could be made out in the hanging drop, in chains and singly. Actual motion was also seen. After cultivation of the bacilli on this special medium, the organisms could also be induced to grow out on plain agar and ordinary nutrient beef broth. On agar, the typical appearance of colonies was a "dew-drop" formation. In the case of these plain media, the reaction was strongly alkaline. After a few days, the "dew-drops" showed a more or less whitish center with transparent margins which later became less transparent and even indented or fan-shaped. In twenty-four-hour-old gelatin stab cultures, there form minute grayish colonies along the stab, with a slight thin pellicle on the surface. Arboreescence could be noted and liquefaction made out on the fourth day. The bacilli grown on this special medium stain well with Loeffler's methylene blue, with Nicolle's carbolfuchsin and with diluted carbol-fuchsin. They are decolorized according to Gram's method. Degeneration forms are seen in older cultures.

The writer concludes from his researches that (1) he has cultivated from leprous tissue a bacillus that differs from Hansen's bacillus in staining reaction and size, and that this leprous tissue contains many leprous bacilli, apparently in a pure state; (2) that these bacilli, mixed with dilute human serum, show the Pfeiffer-Bordet reaction *in vitro*, leper serum acting much more rapidly than non-leper serum; (3) that the reaction of leper serum is brought about by the concurrent action of two substances present in leper serum, the sensibilizer and the alexins, and that the reaction of non-leper serum is only to be attributed to the presence of the alexins; (4) that this sensibilizer, which attaches itself to the described bacilli, only occurs in leper serum; (5) that experimental researches have proven that the sensibilizer is a specific substance, that there exists a causal connection between the micro-organism cells and their sensibilizer, and that the occurrence of a sensibilizer is a general law in immune sera; (6) that the bacilli which he has cultivated and described are the true agents of leprosy, because leper serum alone contain a sensibilizing substance for them; (7) that the susceptibility of leper bacilli to the action of leper serum, even in weak dilutions, gives a plausible explanation to the numerous failures to cultivate these bacilli.

Sterility of Bile.—E. S. CARMICHAEL (*Journal of Pathology and Bacteriology*, September, 1902).—The writer made a number of experiments to determine what influence the injection of bacteria into the portal system had on the sterility of the bile in the gall-bladder. Typhoid and colon bacilli and streptococci were injected, and in all experiments, with the exception of one, after the injection of

varying quantities from five minims upwards, the bile remained sterile and in its normal condition, showing that although the general circulation contained numerous bacteria, none could pass through the normal hepatic tissue. It is therefore probable that infection of the bile does not take place through the portal vein or liver from the gastro-intestinal tract.

Ring Test for Indol.—S. B. GRUBBS and EDWARD FRANCIS (Bulletin No. 7 of the Hygienic Laboratory, U. S. M. H. S.).—The writers state that the text-book description of the procedure of testing for the production in culture media of indol is not sufficiently comprehensive, and consequently the statement that a given organism does or does not produce indol leaves us, in most cases, very uncertain as to just what is meant. They recommend the "ring test" in determining the presence of indol on account of its simplicity, its clearness and its delicacy. The following comprises the technique to be followed: To 7 c.c. of the 24-hour-old culture add 8 to 10 drops of concentrated sulphuric acid, and shake; then let 3 or 4 c.c. of a 1-1000 sodium nitrate solution run carefully down the side of the tube so as to form a sharp line of contact between the heavier culture and acid and the lighter nitrate solution, when the pink color will contrast sharply with the portions above and below.

Collodium Sacs.—S. B. GRUBBS and EDWARD FRANCIS (Bulletin No. 7 of the Hygienic Laboratory, U. S. M. H. S., May, 1902).—Since the publication of the work of Metschnikoff, Roux and Salimbini on the toxins of cholera, the growing of cultures in collodium sacs placed in the peritoneal cavities of animals has become a common procedure in bacteriological laboratories when it is desired to increase the virulence of a given organism through the action of the nutrient body juices, and yet be protected from the influence of the body cells and the phagocytes. As usually made, the sac is moulded over the end of a glass rod by dipping it several times into the collodium solution, after which it is peeled off. These writers recommend that the sac be made over a glass frame made of a small test-tube, through the sides of which numerous small holes are blown. This insures perfect firmness to the sac when it is inserted into the animal. It overcomes the many disadvantages of the sac as previously employed. In the sac hitherto described there is the danger of tearing and destroying the sac in peeling it off the rod. There is considerable difficulty in attaching the sac to the glass frame, and if no frame is used the sac has no support, may become shriveled, and is liable to tear on removal from the animal's abdominal cavity if bound around by adhesions.

Preliminary Note Upon Employment of an Antistreptococcus Serum in Severe Cases of Scarlet Fever.—GEO. A. CHARLTON, M. D. (*Montreal Medical Journal*, October, 1902).—This observer reports favorable results in the treatment of scarlet fever with the use of an antistreptococci serum. He believes that the good effects of this serum are due to the fact that scarlet fever, pure and simple, is a mild disease, but that the severe cases are those in which there is a mixed infection—i. e., a streptococcic plus a scarlatinal infection. He says that simple uncomplicated scarlatina means no added streptococcus infection. In the cases treated by this method he found streptococci in the blood and throat. With this serum he induced a rapid subsidence of the pyrexia; an accompanying decrease in pulse-rate with improvement in tension and rhythm; prevention, or at least marked amelioration of such complications as cervical adenitis, otitis media and albuminuria; rapid and favorable convalescence in the majority of cases.

He believes that the diplococcus of Class can be found in a great number of cases of scarlatina, but does not think it causes the disease.

[EDITOR'S NOTE.—The diplococcus of Class has been made to fulfill all the

postulates of Koch. In the hands of numerous investigators this diplococcus has been found to be a constant organism of scarlatinal infection. The work of Class certainly does not vitiate the position taken by Charlton in this paper—*i. e.*, that the streptococcus may cause some of the unfavorable symptoms of the disease. Nevertheless, the editor, with the knowledge gained by personal experience with the Class organism, must adhere to his belief that that organism is the essential cause of scarlet fever. The excellent paper of Jacques which was read before the American Medical Association brings the matter to date and gives succinct reasons for believing in the legitimacy of the Class organism.]

GYNECOLOGY AND OBSTETRICS.

IN CHARGE OF

HUGO EHRENFEST, M. D.

Nephritis as Indication for the Artificial Interruption of Pregnancy.—M. HOFMEIER (*Monatsschrift fuer Geb. und Gyn.*, October, 1902, Ergaenzgsh).—*Chronic nephritis* has a very unfavorable influence upon the condition of pregnant women. It often leads to the formation of edema, transudations into the abdominal cavity, into the pleura and the pericardium, and frequently terminates fatally after confinement. Danger of eclampsia is rather small. Of thirty-three cases of this category in the obstetric clinic of Berlin, eleven died from the effects of the nephritis, none from eclampsia, the fetal mortality being from 50 to 60 per cent. The author concludes: In cases of chronic nephritis pregnancy should be interrupted in the interest of the mother, if, despite a proper therapeutics, the secondary symptoms of the nephritis, such as edema or transudations, grow worse.

Kidney of pregnancy is in all probability due to toxic conditions. That kidney of pregnancy could transform into a chronic nephritis has never been proven. A proof that there was no lesion of the kidney previous to pregnancy is important but often difficult to establish. The danger of eclampsia is in this condition larger. The author concludes: In cases of kidney of pregnancy artificial interruption of pregnancy is indicated on account of the danger of eclampsia, if, despite a proper dietetic treatment, the symptoms become more unfavorable.

Acute nephritis occurring during pregnancy may, without interruption of same, disappear under appropriate treatment. In contradistinction to the kidney of pregnancy the urine here always contains blood. The author concludes: In cases of acute nephritis, artificial interruption of pregnancy is not indicated, because a cure is possible and artificial termination of pregnancy does not exclude the possibility of eclampsia during labor.

Internal Diseases as Indications for Artificial Termination of Pregnancy.—FRIEDRICH SCHAUTA (*Monatsschrift fuer Geb. und Gyn.*, October, 1902, Erggsh).—The writer bases his conclusions upon the observations made in 40,000 confinements. His paper deals in detail with almost all diseases which may necessitate or justify an interference with pregnancy. The most interesting of his deductions are the following: Psychoses justify interruption of pregnancy only if there is danger of suicide, diseases of the spinal cord or hysteria never do, epilepsy only in very severe cases. Among diseases of the eyes, retinitis albuminurica forms the most frequent indication. Pneumonia, pleuritis and pneumothorax should be considered contraindication for interference. In far progressed cases of pulmonary tuberculosis no benefit for the mother can be expected from an artificial interruption of pregnancy in the later months. More advantageous is artificial

abortion in the earlier months, especially in cases of tuberculosis of the larynx. In cases of incipient tuberculosis interference is indicated both in the interest of mother and child in later months, if the tubercular process is fast progressing. In hopeless cases of tuberculosis interference may be justified in the interest of the child as soon as it is viable. In miliary tuberculosis pregnancy should be interrupted as soon as the fetus is viable. Under proper care 95 per cent. of all pregnant women suffering from diseases of the heart pass during confinement without any disturbances. Complications of heart diseases with tuberculosis or nephritis impair the prognosis considerably. The least favorable prognosis is offered in stenosis of the mitral valve. Artificial interruption is in this condition justified if there is the slightest sign of disturbance of compensation. The prognosis of hyperemesis is more favorable than is generally believed. Only in very rare instances interruption of pregnancy seems unavoidable. Appendicitis requires immediate operation. Albuminuria and nephritis are indications for interference if dietetic measures do not bring improvement. In chronic nephritis pregnancy should be interrupted as soon as the fetus is viable or if grave complications occur. Diabetes gravidarum gives a very unfavorable prognosis; 25 per cent. of the author's cases died. Pregnancy should be interrupted in the earliest stage. The acute infectious diseases offer no indications for an interference with an existing pregnancy. Tumors, such as myomata, cysts, dermoids, etc., do not justify artificial interruption. The decision as regards dealing with cases of carcinoma of the uterus is made without consideration of the existing pregnancy.

Hysterectomy in Cases of Puerperal Infection.—H. FEHLING (*Monatsschrift fuer Geb. und Gyn.*, October, 1902, Ergaenzgsh).—The author arrives at the following conclusions from his own wide experience and a study of the literature: (1) The puerperal infections of the uterus are best divided into toxic and infectious. (2) The toxic processes (sapremia) are limited to the uterus proper. Infectious processes soon transgress the boundaries of the uterus and lead to severe general infections of the body. (3) Extirpation of the puerperal uterus in cases of a general infection (septicemia) is a hopeless operation and should not be performed. (4) From a theoretical standpoint hysterectomy can only be justified if the focus of intoxication or the infection is limited to the uterus, that is, in cases of disintegration of retained placental tissue, of decay of myomas after confinement or of other tissues after incomplete abortion, granted that these sources of infection cannot be removed in any simpler way. Thus it may be seen that the indications for hysterectomy are very limited. (5) In certain cases of metrophlebitis puerperalis (pyemia) hysterectomy may be beneficial, especially in combination with ligation and extirpation of thrombosed veins in the broad ligaments or the vena spermatica.

Hysterectomy in Cases of Puerperal Infection.—TH. TUFFIER, Paris (Internat. Gynecolog. Congress, Rome, 1902; *Centralbl. fuer Gyn.*, No. 44, 1902).—The author suggested this mode of treatment in 1899. After considerable personal experience and a careful observation of all the cases recorded in literature, he holds at present the following views on this question: From a pathologic-anatomic standpoint there undoubtedly exist certain puerperal infections of the uterus which justify the extirpation of this organ. From a clinical standpoint, however, it must be conceded that there are no unmistakable symptoms which would conclusively indicate the operation in the given case. Only the general appearance of the patient and the course of the disease in the special case are decisive. If in a case of septicemia after confinement or abortion, a reasonable cause for the fever cannot be detected, either in the external genitalia or in any other organ of the body, if the usual mode of treatment (intrauterine douche,

curettment, injection of serum, etc.), prove ineffectual, if the uterine appendages and the peritoneum are intact, the uterus is found large and flabby, and if there is an offensive discharge from the vagina and the general condition of the patient allows such a severe operation, in the author's opinion panhysterectomy is indicated.

The most difficult problem in this connection is the question when should the operation be performed. "Too early operation is a crime, too late operation a reasonless procedure." The author performs the operation both *per abdomen* and *per vaginam*, according to the size of the uterus.

PEDIATRICS.

IN CHARGE OF

ALFRED FRIEDLANDER, M. D.

Buttermilk as Infant Food.—BAGINSKY (*Pediatrics*, November 15, 1902) reports results of feeding one hundred and eighty-two children in the medical wards of his hospital on prepared buttermilk. The buttermilk was made from pure cream, soured by means of bacteria, so that the fat is extracted to a minimum.

To one liter 15.0 to 25.0 of wheat flour and 35.0 to 50.0 of cane sugar are added. With constant stirring the mixture is allowed to boil up three or four times. It is then poured into bottles and kept cool until used. Analysis showed that such milk contains: fat, 0.35 per cent.; proteid, 3.4 per cent.; sugar, 4.2 to 5.7 per cent.; starch, 0.26 per cent., and, further, that it is strongly acid, due in part to the presence of lactic acid.

The low fat content is especially noteworthy. The amount to be given was based upon the number of calories previously determined as necessary for the requirements of breast-fed children. Average amounts for different ages are tabulated.

Of the hundred and eighty-two children one hundred and fifty did very well on the food. In many of the other cases various complications were present, and these children did not respond to any other method of feeding.

From his observations Baginsky concludes that:

1. Buttermilk prepared as directed is a good food for acute and chronically sick infants.
2. It is well borne soon after attacks of acute dyspepsia and summer diarrhea.
3. In chronic diarrhea and enteritis it may be looked upon "as a life-saving preparation."
4. More observations are needed as to its use as an actual food for healthy infants.
5. In cases where its use was long-continued no disturbances of nutrition, such as rickets or scurvy, were developed.

Bronchitis and Broncho-Pneumonia in Children.—MITCHELL (*Archives of Pediatrics*, November, 1902) says that prophylaxis is of the utmost importance. Many children are subject to recurring attacks of bronchitis (with constant danger of pneumonia).

Prophylaxis rests (a) upon building up the constitutional vigor; (b) upon isolation and pure air.

Ad a. Special diatheses, syphilitic, rachitic, strumous or lithemic should have appropriate treatment.

Adenoids and enlarged tonsils should be removed.

Ad b. Feeding, clothing, bathing and exercise should be carefully watched. Proper ventilation of the sleeping apartments is of prime importance. The child should get as much fresh air as possible, day and night. While prophylactic medicinal treatment is often needed, any drugging which interferes with the appetite or digestion should be avoided.

In the treatment of acute attacks the author has discarded the heavy poultice, substituting the cotton jacket.

The question of administration of alcohol must be decided by the individual case.

Antipyretics should *not* be used to control the temperature; baths begun at 100°, gradually reduced to 80°, are much better and not depressing.

The hot bath, according to the author, is the most valuable of all measures. It should be given at 105° for 10–20 minutes every 3–6 hours, according to severity of cyanosis, dyspnea, or nervous symptoms.

Careful feeding is of much importance, and medication should not be allowed to interfere with digestion and nutrition.

For the control of cough, steam inhalations, simple or medicated, are of value.

Where the cough is harsh, dry and exhausting, opiates may be given.

In the subacute or chronic cases the creosote preparations, especially the carbonate of guaiacol, are valuable.

For heart stimulation strychnia may be used, though its use should not be too long continued, on account of the danger of overstimulation and consequent paralysis.

Tuberculosis in Infancy.—At a meeting of the German Medical Association (Section in Pediatrics) held at Carlsbad in September of this year, Professor Schlossman read a paper with this title. A report of the society proceedings is given in the *Jahrbuch fuer Kinderheilkunde*, vol. 56, *Erganzungsheft*, from which this abstract is taken. The author concludes that:

1. In infancy tuberculosis unassociated with other infections is seen in the majority of the cases.

2. In many cases the course is absolutely febrile.

3. In the majority of the cases, examination of the sputum (when it can be obtained), or of mucus obtained by wiping out the mouth, or by aspiration, contains *no* tubercle bacilli. In the feces, bacilli can occasionally be demonstrated.

Sometimes inoculation of the mucus from the mouth gives positive results in guinea-pigs, even where no bacilli can be found.

4. The only absolutely sure diagnostic aid is tuberculin.

With proper precautions this is perfectly safe.

5. Primary tuberculosis of the gastro-intestinal tract (mediastinal glands and intestine) has never been observed by the author, and he questions whether it ever occurs. The diagnosis cannot be established macroscopically. It must always be made microscopically or by animal inoculation.

6. The gastro-intestinal tract of nurslings is not easily infected. Enormous numbers of tubercle bacilli are necessary to infect stomach, intestines, or mesenteric lymph nodes

7. Infection of the mesenteric lymph nodes need not be secondary to infection of the intestine, but can occur by way of the lymphatic circulation from primary infection of the bronchial glands.

8. The bronchial glands are usually affected early, though they need not be the primary seat of infection. This may at times be found in the tonsils and in the naso-pharyngeal mucosa.

9. Course is usually subacute, cavity formation not being rare. Tubercular meningitis and tubercular disease of the bone are rarer.

10. In every case of tuberculosis in infancy careful investigation will show

that the infant has been in close personal contact with a tubercular patient. *Tubercular infection from milk plays absolutely no role* in the etiology of tuberculosis of infancy in Germany.

[The abstract has been given somewhat *in extenso*, because the views advanced differ materially from those held in this country. In the discussion which followed the reading of the paper, the views of the author were generally concurred in. It is noteworthy that several leading pediatricists, among them Escherich, agreed that infection from milk was "extraordinarily rare." The preponderance of opinion was that the tuberculin test, made with proper precautions, was perfectly safe, and a valuable diagnostic aid.—ED.]

Gastro-Intestinal Diseases in Infancy.—TRUMPP (*Wurzbürger Abhandlungen aus dem Gesamtgebiet der Praktischen Medizin*, Heft. 3, No. 1).—In this short monograph the author summarizes modern German views on some of the more common of these affections.

He shows that the explanation of many of the conditions frequently present is to be found in the anatomical structure of the infantile parts. The importance of bacterial infection in infancy is very great. Breast-fed children are less often affected than the artificially fed, partly because the mother's milk contains protective substances (of the alexine group) which confer more or less immunity in the child.

While the direct digestive processes go on with comparative ease, in even very young children, assimilation (internal digestion) is often interfered with, because of lack of functioning power in those glands with internal secretion, whose activity regulates body metabolism (thyroid, pancreas, adrenals).

This explains some of the difficulties of artificial feeding, because of the difficulty of assimilation (not of digestion *per se*) of the artificial foods, in which class cow's milk must be placed.

It is to be remembered, however, that cow's milk has a great affinity for the free HCl in the infant stomach. The casein could be digested by the lactic acid always present, or as a result of the activity of the trypsin ferment in the intestine. But the absence of free HCl in the stomach allows bacterial infection and putrefaction to go on the more readily. This bacterial infection is to be considered as ectogenous (where the bacteria are brought into the alimentary tract from without) or endogenous (resulting from perverted activity of germs already within the canal). Ectogenous infection occurs when, either through functional or anatomic disturbances of the digestive apparatus, the chemism of digestion is interfered with, so that culture media are given for the development and pathogenic activity of germs already within the canal, or of germs brought in from without.

It is thus possible to have secondary endogenous from primary ectogenous infection.

A third possibility of infection is by direct transmission by the nurse or utensils or the like from one child to another.

This form is naturally most often seen in institutions. Practically, any of the germs pathogenic for man may produce enteritides of this sort. The author recognizes:

1. Dyspeptic affections (*a*) with excessive acidity; (*b*) with hypacidity.
2. Catarrhal affections.
3. Inflammatory affections (acute).
4. Chronic affections, including secondary infantile atrophy.

With reference to treatment, he insists upon the importance of prophylaxis, laying special emphasis on the need for scrupulous cleanliness, especially in the case of artificially fed infants.

He is convinced of the value of peptonized milk as a food in many cases, and has also seen good results from the use of buttermilk. Treatment otherwise is that usually recommended.

ORTHOPEDICS.

IN CHARGE OF

MALVERN B. CLOPTON, M. D.

Some of the Orthopedic Conditions of the New-Born Demanding Early Surgical Treatment.—CHARLES F. PAINTER (*The Boston Medical and Surgical Journal*, September 11, 1902).—Leaving to nature the correction of many manifest defects in this author's opinion is a practice too commonly followed by all classes of physicians. He cites clubfoot, a common congenital deformity, as being especially amenable to early treatment. Frequently pulling the foot to the valgus position and applying the proper brace and straps should correct the deformity as early as the third or fourth week; but the use of the brace and straps must be continued for several months and the manipulation for a year or a year and a half. When walking is begun, shape the shoe-soles so as to favor the valgus position.

Flatfoot demands no attention until the child begins to walk, and then by slightly raising the inner side of the shoes worn a cure is easily effected.

Congenital dislocation of the hip, he says, usually goes unrecognized until walking is attempted. In many cases treatment avails little. Ankylosis of the hip is a frequent result when the open incisions are done, and a recurrence of the dislocation is more frequent following this operation than when the bloodless method is practiced. The latter is to be preferred and the attempt at the reduction should be made near the end of the third year.

Hematoma of the sterno-mastoid, which probably is mechanical and not due to syphilis, as has been supposed, gives rise to torticollis as its principal symptom. Manual correction is all that is necessary.

In spastic paraplegia treatment combating the tendency to contractures should be begun early and persisted in through the entire growing period.

Obstetrical paralysis should be treated early with a bandage to overcome the characteristic deformity, then after the first few months massage and electrical treatment should be begun, and then later active and passive muscular exercise added. This is always due to injury of the brachial plexus, but congenital and traumatic dislocations have been mistaken for it.

Harelip should be operated on during the first year, but the cleft palate operation is better done by waiting until such a time as an obturator can be fitted.

Hernie that occur during the first year can usually be permanently cured by a truss. Anyway, if the truss is controlling the sac defer the operation when it is necessary until the fourth or fifth year.

Congenital absence of tibia or femur is referred to as being simply a question of mechano-therapeutics, and unclosed bronchial clefts as purely surgical. The results of operative interference in spina bifida and meningocele have been poor.

Genito-urinary defects, such as exstrophy of the bladder and epi- and hypospadias, require early surgical treatment. Many repeated operations will be necessary, but the final results are gratifying.

Fixation the Essential of Treatment for Tubercular Joint Disease.—EDWARD A. TRACY (*Pediatrics*, November 15, 1902).—Attention is called to a paper presented by the writer at the fifty-first meeting of the American Medical Association in the section of children's diseases, in which, in marked contrast to the teachings of other American orthopedists at the time, he advocated fixation as the prime requisite in the treatment and considered traction necessary only

for the purpose of overcoming spasmodic contractions of the muscles. He criticises a recent article of Young's, of Philadelphia, on several points, but particularly for indefinitely condemning all other methods of treatment except traction. Fault is found with another writer, Lovett, for not ascribing to the fixation the good result obtained by the use of a certain hip splint which he described in an article published.

He thinks that for many reasons wood plastic should be the chosen material in fixation, chiefly though because it can be applied directly over the skin, thereby really fixing the part. No real fixation is obtained when plaster of Paris is used with the lint primarily swathed in cotton.

Three cases are reported that were treated in the manner he supports. One a boy, aged four and one-half years, in whom the metatarsal joints about the cuboid bone were involved. Another, aged six years, with involvement of both knee-joints, and the third one, aged eleven years, with hip-joint disease.

In each of them the cure was complete.

The Prevention of Deformity.—WISNER R. TOWNSEND (*Journal of the American Medical Assoc.*, September 11, 1902).—Notice is directed to the laxity of attention by the medical profession to this subject, the prevention of deformity, in comparison with the activity along so many lines in preventive medicine. He affirms that at least half of all the deformities we meet could have been prevented; that practically all due to poliomyelitis, and the majority of the cases of non-congenital clubfoot and the serious clubfoot which often results from a slight congenital one, could with care and simple treatment be obviated. He urges a conception of the possible deformities following treatment of chronic joint diseases, following burns, following operations upon bones and muscles, of those due to a faulty position in bed in any prolonged illness, of those due to synovitis, rheumatism, septic conditions of soft parts or articulations, etc., and of those due to the faulty position maintained by many in their ordinary avocations, and a bringing to bear of means and procedures by the profession to prevent.

Report of a Case of Claw-Hand Resulting from Compound Fracture of the Fore-arm; Cured by Operation.—H. P. H. GALLOWAY (*Canadian Journal of Medicine and Surgery*, November, 1902).—The case reported is that of A. B., aged eighteen years, who, when a young child, suffered a compound fracture of the right forearm, from which he recovered with firm union and without deformity or loss of function. But later there came a gradually increasing difficulty in extending the fingers, until finally when the patient came to him, July 1, 1901, extension with the wrist in line with the arm was impossible. When the wrist was flexed the fingers could be extended, showing that the condition was due to a shortening of the flexor tendons of the fingers. The thumb was not involved. Through a longitudinal incision three and a half inches long in the middle of the lower part of the anterior surface of the forearm the flexor tendons of each finger were trans-fixed, split for one and a half or two inches, and then at either end of this incision the knife was made to cut its way out through the tendons upon opposite sides. The proximal and distal portions of the tendons were drawn past each other far enough to permit the fingers being straightened with the wrist extended and in this position sutured. As a result of lengthening the tendons in this manner, within six weeks the patient could write legibly and had a fairly firm grasp, and now at the present date the condition is all that could be desired, the fingers being practically straight and the function of the hand perfect.

NEUROLOGY.

IN CHARGE OF

SIDNEY I. SCHWAB, M. D.

A Case of Ophthalmic Goitre Presenting Some Unusual Features.—C. S. POTTS (*Phila. Med. Jour.*, November 22, 1902) reports a case of a man, thirty-nine years old, who, in addition to most of the usual symptoms of exophthalmic goitre, showed a marked ankle clonus, which disappeared as his condition improved, and suffered from attacks of complete unconsciousness. Marked improvement followed the use of sodium phosphate and the treatment of a chronic hypertrophic rhinitis. Oppenheim, while he does not specify the possible existence of an ankle clonus, says that the deep reflexes may be increased or diminished. This case would seem to show that we may have a well-developed ankle clonus present in cases in which there is not organic disease of the cord. It is not thought probable that in this case the clonus was of hysterical origin, although evidently due to some functional disturbance of the cord, probably caused by the poison of the disease.

Treatment by the Tourniquet to Counteract the Vasomotor Spasm of Raynaud's Disease.—H. CUSHING (*Jour. Nerv. and Ment. Dis.*, No. 11, 1902).—An ingenious method of treating the vasomotor spasm in this disease is here described. The patient, a woman of thirty-five, presented the usual symptoms of Raynaud's disease, with marked arterial spasm, associated with great pain. For several months a condition of local asphyxia of all the digits had been present, with exacerbation of almost daily occurrence. On several occasions these attacks were so severe that slight superficial patches of terminal gangrene had affected the pads on one or more of the toes and fingers. A flat rubber bandage is applied to the extremity early in the course of the arterial spasm. On its removal after one or two minutes' application a bright flush of the extremity follows, with increased surface temperature. The vasomotor relaxation lasted only a short time, but the patient experienced a sensation of considerable relief. The tourniquet is applied daily, according as one or another extremity becomes affected. The treatment by this method is most simple of application, and from its apparent success in this instance deserves further trial. It depends, seemingly, in principle upon the physiological blocking effect of the elastic constriction on the peripheral vasomotor nerves. The treatment has its limitations, and is not applicable to a case where vascular spasm affects territories other than those confined to the extremities.

The Mental State of Czolgosz, the Assassin of President McKinley.—WALTER CHANNING (*Am. Jour. of Insanity*, No. 2, 1902).—The interest in the medico-legal aspect of the assassin of President McKinley has not abated since his execution, nor has the fact of his sanity or insanity been definitely settled, although his trial and execution have legally ended the case. This study by Channing is by far the most noteworthy contribution that has as yet appeared on the subject, and it merits attention, especially on account of its possible application to such problems as may in the future arise. Most of the matter presented in this paper bearing upon the history of Czolgosz before the crime, and his family, is new. This material was personally collected by the author and his assistant in Cleveland and other places. The paper goes into great detail in the matter of the personal history of Czolgosz's family and their relations to him previous to the date of the assassination. The personal and the clinical history

of Czolgosz is also carefully investigated in the light of the new data which the author of this paper has been able to collect. The following conclusions are noted as the result of this careful and painstaking investigation:

"(1) I feel that, from fuller information than that possessed by these experts who examined Czolgosz after his crime, the opinion then expressed by them cannot be accepted as the final one. (2) Owing to lack of time it was impossible in the examination referred to, to investigate the early history of Czolgosz. Had this been done, some of his statements would have been found to be inaccurate. (3) He was not, in my opinion, an anarchist in the true sense of the word; and while anarchist doctrines may have inflamed his mind and been a factor in the crime, it was not the true cause or an adequate explanation. (4) He had been in ill-health for several years, changing from an industrious and apparently fairly normal young man into a sickly, unhealthy and abnormal one. (5) While in this physical and mental condition of sickness and abnormality, it is probable that he conceived the idea of performing some great act for the benefit of the common and working people. (6) This finally developed into a true delusion that it was his duty to kill the President because he was an enemy of the people, and resulted in the assassination. (7) His conduct after the crime was not inconsistent with insanity. (8) His history for some years before the deed, the way in which it was committed, and his actions afterward, furnish a good illustration of a typical regicide or magnicide as described by Regis. (9) The post-mortem examination threw no light on his mental condition, and would not invalidate the opinion that the existing delusion was the result of a disturbed brain action. (10) Finally, from the study of all the facts that have come to my attention, insanity appears to me the most reasonable and logical explanation of the crime."

Tabes Dorsalis and Aortitis—ARULLANI (*Rev. Neurolog.*, October 30, 1902).—The occurrence of aortic disease with tabes dorsalis has long been recognized. This report is based upon a material of sixty-eight cases, of all ages and severity. In the majority of tabetics the heart and the aorta can be said to be abnormal. The most pronounced abnormal sign is the increased frequency of the heart rate and the augmentation of the second sound at the right of the sternum, an evident sign of the dilatation of the aorta. Forty cases in the above series have shown evidence of aortitis, sometimes very well marked. Among them were eleven cases of insufficiency and two aneurisms. The author concludes as follows:

"Aortitis is very frequent among tabetics, more so than has been commonly believed. The examination of the heart and the blood vessels should be very carefully made. The aortitis explains very well the cardiac trouble found so frequently in tabetics. The commonest lesion is an aortic insufficiency. This insufficiency is almost always relative. The frequent appearance of aortitis in tabes explains also the occurrence of aneurisms. That syphilis is an important etiological factor in the causation of the heart and blood vessel lesions is as well proven as that syphilis is an important etiological factor in the lesion of the central nervous system."

GENITO-URINARY SURGERY.

IN CHARGE OF

H. MCC. JOHNSON, M. D.

Some Special Points Upon the Microscopic Characters of the Prostate and the Bladder of Old Men.—**I**ASTREBOFF (*Ann. des Mal. des Org. Genito-Urin.*, October, 1902).—According to Motz, the principal cause of dysuric manifestations with old men resides, in the first place, in feebleness of the bladder, and, in the second place, in congestion of the urinary apparatus. To find a reason for this feebleness and congestion the author has made some microscopic researches upon the prostate of forty subjects, aged more than fifty years, among whom eleven had presented during life difficulties of micturition, under the form of frequent desires to urinate and temporary urinary retentions. Elastic fibres penetrate, under the form of a thick network, the connective interstitial tissue of an organ, and form a solid membrane around the capillaries circulating in the interior of the tissue; on the one hand protecting them against pressure from the tissue, and on the other preventing their exaggerated dilatation before the augmentation of the blood pressure and contributing to regulate the more active circulation of the blood current. It is due to this action that the volume of the organ is maintained in its normal state.

From the author's researches he is convinced that the microscopic structure of the prostate of old men presents very great variations, and that it is absolutely impossible to define a general type of structure for the senile prostate. Nevertheless, in a great number of cases there is an abundant development of intermediary tissue, with a predominance of conjunctive tissue, to the detriment of the glandular tissue. He has observed a very clear diminution in the quantity of elastic fibres in the senile prostate as compared with that in the prostate in the normal youth; also the degeneration of these fibres and their complete disappearance. The disappearance of the elastic fibres in the conjunctive tissue of the prostate of old men, together with the dilatation of the veins in the glandular parenchyma, favor the congestive state of this organ which accompanies its increase of volume and augments the obstruction to micturition. The primary weakness of the bladder in the dysuria of old men resides in a quantitative diminution of the anatomical elements; be it in the atrophy of the muscular elements and their disappearance, or in the degeneration of the elastic fibres, allowing dilatation of the veins and thus a congestive state of the bladder. These two processes, that is to say, atrophy of the muscles and disappearance of the elastic fibres, go hand in hand, are evidently influenced by the age of the patient, and become more pronounced if in addition to age there is added a chronic affection of the bladder or a passive dilatation of its cavity following repeated urinary retention, voluntary or involuntary, in consequence of untimely or insufficient evacuation of the bladder. Repeated retentions have finally an extremely harmful influence upon the function of the bladder, particularly with aged subjects, with whom the power of regeneration of the tissue is remarkably diminished.

Ligation and Clamping of the Ureter as Complications of Surgical Operations.—**S**AMPSON (*Amer. Med.*, November 1, 1902).—In this excellent expose of the subject the following observations of value to the genito-urinary surgeon may be noted: Ligature about a ureter, if removed before the close of the operation, will probably not have injured the ureter, while the clamp is more liable to give post operative signs of injury. Operative interference with the blood supply of the ureter is more harmful than either clamping or ligating it. Complete occlusion of the ureter, in the absence of infection, leads to atrophy with more or

less dilatation of the ureter and pelvis of the kidney. Ligature is less likely to cause marked hydronephrosis or pyonephrosis than uretero-ureteral anastomosis. Ligature is justifiable only when anastomosis is impossible, but may terminate fatally (a) when renal insufficiency exists, (b) when there is profound shock, and (c) when the knot slips, or the material is absorbed or in some way allows leakage. Catheterization of the ureter preliminary to certain pelvic operations is a great aid.

Strictures of the Male Urethra.—GREENE (*Medical News*, October 25, 1902).—The author gives the following conclusions:

1. Careful treatment of chronic urethritis will prevent the formation of stricture.
2. True stricture is of slow growth and can generally be best treated by a prolonged passage of sounds, and proper treatment of any complications co-existent with it.
3. Cutting operations are not now required in strictures which have not been previously incised. Strictures once incised, unless kept open, are liable to require further incision.
4. Incision being necessary, it is best to do an external urethrotomy, combined with an internal urethrotomy if required.

The Therapeutic Employment of Adrenaline in the Urinary Tract.—BARTINA (*Ann. des Mal. des Org. Genito-Urin.*, November 1, 1902).—It would seem that in hemorrhages from the bladder, due to such a cause as a benign growth, adrenaline would be of much service, but from the experiences of the author he is led to regard it as only palliative and of no practical service as a curative agent; for its hemostatic action continues for two hours only, after which the hemorrhage renews itself with equal, if not increased, intensity. This hemostatic, however, is of much service for making a differential diagnosis between kidney and bladder hematuria, for, if after a vesical instillation of adrenaline, the urine that we get from time to time remains clear or considerably clear, we can be quite sure of a vesical hematuria. Also in making cystoscopic examinations of a bleeding bladder, adrenaline can be of use in preventing the hemorrhage which is often such an impediment to a satisfactory cystoscopic examination. Albarran has employed it for the purpose of facilitating a cystoscopic examination, as it diminishes the local sensibility of the patient, and prevents the slight bleeding of the deep urethra which in some cases soils the prism of the instrument.

But it is in strictures of the urethra that the author has made special studies of its use, and has obtained the most striking results. In these cases congestion and spasm are the two factors which, added to the lesion, offer such an impediment to the passage of an instrument. Adrenaline very promptly so reduces the congestion and relieves the spasm that a stricture which, before its employment was impassable, becomes easily passable after its use. The strength of the solution used is one to a thousand.

Urine From Each Kidney.—VALENTINE (*Medical Record*, October 25, 1902).—Ureteral catheterism, indisputably the best, has its limitations, and also a goodly number of opponents. For it the bladder must have a capacity of at least 50 c.c., must not be a bleeding bladder into which one or the other kidney is pouring blood too rapidly for the irrigating cystoscope to wash away, the bladder walls must not be desquamating large shreds, and the ureters must be large enough to admit the smallest catheter, besides other conditions evident upon a moment's thought.

Ureteral catheterization demands continual practice, greatest possible skill, acute vision and most delicate manipulative tact. For this reason segregation occupies a distinct place in urology. Harris' and Downes' instruments for segregation are founded on the principle of the water-shed, and present distinct

inconveniences when used upon the male. Cathelin's method which is here fully described by Valentine is considered by him to possess decided merits. [Cathelin printed a description of his instrument in the *Presse Medicale* (No. 48, June 14, 1902), and has given the details of his technique and his principal results in the *Ann. des Mal. des Org. Genito-Urin.* (July, 1902)].

The principle of the instrument is based upon pushing into the bladder a soft rubber membrane which adapts itself to the wall, and which is grasped by the bladder, thus dividing the viscous into two halves.

The Purposes of Ureter-Catheterism.—LEWIS (*Jour. A. M. A.*, November 8, 1902).—The purposes of ureter-catheterism in connection with the cystoscope are twofold: for diagnosis and for treatment. After enumerating its uses in diagnosis and treatment the author describes and illustrates his own instrument, and has this to say in regard to it as compared with the methods of segregation: That its advantages over segregation are very great. In the matter of diagnosis if one uses the segregator and gets tuberculous urine, for instance, from one side, and clean urine from the other side, he is still unable to say just where the tuberculous urine comes from—whether it comes from the bladder on that side, or the ureter on that side, or the kidney pelvis on that side; whereas if he catheterizes both ureters and gets tuberculous urine from one side, he knows that it does not come from the bladder on that side. If he runs the catheter up to the kidney pelvis, he knows that it does not come from the ureter, but does come from the kidney pelvis, or kidney itself on that side. So that the segregation method is a very inferior method as compared with ureter-catheterism. Of course, one cannot do anything in the way of treatment of the ureters or kidney pelvises by the use of the segregator, such as he can do by the use of ureter-catheterizing methods.

DERMATOLOGY AND SYPHILIS.

IN CHARGE OF

MARTIN F. ENGMAN, M. D.

Radiotherapy—Abstracts of Remarks Made by Various Members of the American Dermatological Association Upon X-Ray Therapy, at the Last Meeting of the Association, Held at Boston in September, 1902.—(*Boston Med. and Surg. Jour.*, November 13, 1902.)—Dr. Allen's conclusions were as follows:

1. The X-ray possesses decided therapeutic power and may produce marked injurious effects.

2. From the study of the present series of cases, the writer feels warranted in stating that the X-ray, as a therapeutic measure, is not a passing fad to be dropped after a brief experience.

3. The effect of the method is at times to produce severe symptoms, referable to the heart, lungs or other internal organs, and systemic effects pointing to absorption of products of disintegration thrown into the circulation more rapidly than they can be eliminated.

4. Metastases occur in grave forms of cancer at times much more suddenly than we are accustomed to see in patients not so treated.

5. Cancer itself may follow the injurious effects produced by the ray in a person not known to be predisposed, as instanced in the case reported of the tube-maker whose arm was amputated for carcinoma developing in an X-ray burn cicatrix.

6. The X-ray dermatitis or burn, and many of the good effects as well, depend largely upon the proximity of the tube and the degree of heating of the anode.

7. Tubes at times get into what might be termed a "burning state," and a number of patients may suffer in succession. This condition of the tube must at present be learned by experience, as there is nothing to indicate just when it is so.

8. The method is not one to be solely relied upon in all forms of cancer.

9. In nodular, wart-like and dry growths upon the skin, other means of removal, preferably arsenical paste, should first be employed and the rays then applied.

10. It is not a method that should be employed by electricians or unqualified persons. The manufacturer of strychnia is not the one to whom the administration should be trusted.

11. The indiscriminate application of the ray to all forms of disease, as claimed to be practiced in advertising institutions and by charlatans is apt to bring much unmerited criticism on a really useful method, whose effect is at times almost magical, but most often disappointing.

RADIOTHERAPEUTIC OBSERVATIONS.

Dr. J. Zeisler, of Chicago, the reader, gave the result of his experience in the treatment of various affections of the skin by means of the Roentgen rays. Among the skin lesions treated were the following: Lupus vulgaris and erythematosus, scrofuloderma, hypertrichiosis, sycosis, acne and lichen planus. Also a number of cases of epithelioma and three cases of psoriasis. On the whole, the results obtained were very favorable, and the author stated that his experience with radiotherapy had made him an ardent advocate of that method of treatment. He advised the use of the coil in preference to the static machine.

Dr. C. W. Allen said he had used the static machine almost exclusively, and with entirely satisfactory results.

Dr. A. R. Robinson, of New York, said that in regard to the treatment of sycosis by means of the X-ray, the trouble was that there was some danger of producing permanent alopecia. The speaker said he used the static machine, and thought it was just as good as the other. In regard to the treatment of epithelioma, excepting those situated near the eye or in the region of the blood vessels in the neck, he preferred the use of the curette or caustic, to the X-ray. He mentioned one case of very superficial epithelioma which had been treated every day for two months by the X-ray without much effect, and which was finally cured in two minutes by a caustic application.

Dr. William T. Corlett, of Cleveland, spoke in favor of the use of the soft tube in X-ray work.

Dr. Pusey, of Chicago, said the selection of a tube was largely a matter of choice. The whole point in the technique is to obtain sufficient X-rays to get a reaction without getting a dangerous reaction.

Dr. Stelwagon, of Philadelphia, said that in cases of rodent ulcer in accessible regions he was in favor of making a caustic application, and then supplementing this by the X-ray as the part begins to heal. He has used a static machine with very satisfactory results.

Dr. J. C. White, of Boston, reported a case of carcinoma of the skin developing at the site of a prolonged X-ray dermatitis.

Dr. Sherwell, of Brooklyn, said that while he appreciated the value of the X-ray, he did not think it should entirely supplant the more radical methods in certain cases. He has used the acid nitrate of mercury in hundreds of cases of epithelioma with entire satisfaction, both to the patient and himself.

Dr. F. H. Montgomery, of Chicago, said he thought there was no question that superficial forms of cancer disappear under the application of the X-rays. For the diffuse and generalized forms, there is no other treatment equal to it. For the localized, superficial lesions there is no reason why the knife or caustic

should not be employed, and there is a certain element of safety in supplementing this treatment with the X-rays.

Dr. D. W. Montgomery, of San Francisco, referred to the slight scarring left by the X-ray treatment, which he thought was a very desirable factor in lesions on the face.

The Action of the X-Ray and its Uses in Therapeutics.—WM. B. SNOW, M. D. (*Jour. of Advanced Therapeutics*, November, 1902).—It matters little what is the source of the current which energizes the tube, so long as it excites the character of the ray applicable to the tube at hand. For deep-seated growths tubes of very high vacuum are required, and as a static machine can excite such a tube with less risk to its life, it is preferred to a coil in such cases. Tubes of low vacuum are only efficient in superficial cases; however, they are not superior to tubes of high vacuum for the same cases.

The characteristic effects of the rays upon living tissue following a prolonged exposure or series of short exposures are: (1) Induction of impaired nutrition marked by alopecia and atrophy of the cuticle; (2) irritation evidenced by an itchy sensation; (3) inflammatory action, marked by tanning dermatitis or deep necrosis, the latter followed by sluggish reaction and retarded restoration. The inflammatory reaction depends upon length and frequency of exposures, character of the ray and idiosyncrasy of patient; (4) the rays destroy some forms of germ life most probably by rendering the pabulum unsuitable for growth; (5) the effect upon normal tissues is first to stimulate normal action due to the vibratory effects of the rays or of the ether in the presence of the rays; (6) short exposures induce activity of normal tissue cells, which in some cases, supplant abnormal tissue elements, without showing evidence of disintegration; (7) longer exposures destroy the abnormal tissue elements of low vitality, but do not seriously effect normal tissues unless the exposures are too prolonged; (8) abnormal tissue elements thus exposed break down and disappear through the natural channels of absorption or sloughing; (9) when tumors of considerable extent are rayed, rarely, if ever, over small tumors, a marked reaction occurs, with fever and varying degrees of prostration, and in a recent case of cancer treated by the author a severe diarrhea followed the sixth exposure—it is probable that this reaction arises from breaking down of devitalized tissue and autoinfection, which is often marked during the sloughing process; (10) X-ray causes in the deeper structures, as well as the skin, contraction of the muscular coats of the arterioles, relieving congestion and the consequent pain, as well as diminishing hemorrhage in some diseased conditions.

Radiotherapy—Remarks by Dr. Wm. J. Morton Before American Electro-Therapeutic Association, September 2, 1902.—(*Jour. of Advanced Therapeutics*, November, 1902).—Dr. Morton thought the X-ray treatment was the most important subject that had ever come before this association, and that it would remain an important subject for a long time to come. So far as his experience had gone in the practice of medicine, both medical and surgical, he had learned that there was no more important adjunct to the therapeutics of disease than the X-ray, if one excluded anesthesia. Many might contend that there was a rivalry between the X-ray and the knife, but this he believed would soon be settled by increasing experience. It was well known what the knife could do, but the question was: What could the X-ray offer which would detract from the recognized procedures of surgery? He had been deeply interested in the paper, but it was so comprehensive that it was difficult to discuss it. He was a little disappointed to see any other method of treatment employed in conjunction with the X-ray, and was sorry that the brush discharge had been employed in this way, because it was most important to know what did the work, the brush discharge or the X-ray. A prominent practitioner in London was now claiming to cure consump-

tion by high potential discharges, and another very prominent practitioner in that city claimed that the curative results obtained from the X-ray tube were from the ordinary electricity and not from the X-ray. Much time had been wasted in discussing whether coils or static machines were employed. He employed both constantly, and it seemed to him entirely immaterial which was used; the X-ray seemed to him to be the same regardless of the source. We would probably soon have a means of measuring the intensity of the X-ray, and with an X-ray of a given intensity he saw no reason for expecting any different effects from such X-ray whether produced by a coil or by a static machine. The coil was not harder on the tube than the static machine. He had had two high tubes which could not be actuated by powerful static machines, and yet could be easily excited by a coil—a manifest advantage. He tested the tube with the fluoroscope at a distance of two feet, and determined whether he could get a good result through the wrist or through the thorax. In this way he found that, except with the high tube, he could not get a view of the deeper parts. The action of the X-ray should be sufficiently intense to reach the part which it is desired to treat, hence, the scientific and careful observer was forced to make use of high tubes for the treatment of many cases because otherwise there was no guarantee that the X-ray reached the desired part.

With regard to the action of the X-ray on living tissue, he thought we knew nothing whatever about it at present. The physicists were floundering about, and the pathologists were far from agreed as to what was the nature of cancer. At the present time, therefore, our knowledge was wholly clinical. He had found it an exceedingly grave responsibility to determine whether or not he should accept cases of cancer for X-ray treatment. If a surgical operation offered the best chance, it would certainly be culpable to treat such a case by means of the X-ray. The superficial cancers, particularly of the face, could be almost invariably cured without the knife, caustic pastes, or mercurial cataphoresis. All of these other methods remove tissue in bulk, both healthy and diseased, and the amount to be removed was entirely decided by the operator. On the other hand, the X-ray had the power of influencing diseased tissue wherever found. If the X-ray could cure the affected lymphatics and the primary carcinoma, then, of course, it had cured thousands of unknown foci. What paste, what mercury, and what scalpel would do this? If this were the truth regarding the action of the X-ray, then a wonderful advance had been made in the treatment of cancer. He thought most of those working in this field would admit that this was the truth. He was of the opinion that many had erred in using the screen. It was the device of the timid operator to prevent certain parts of the body from being burned. He had, in his own practice, practically discarded the use of the screen. The mere fact that a small carcinomatous area might develop in a few days into a rapidly spreading infection, or might already be spreading, showed the need of treating the parts widely. He would not, for example, treat a tumor of the axilla without also treating with the axilla the entire thorax, both front and back. He only used a screen at the present time to protect the hair and eyes, and for this purpose he used one made of tin foil. It was possible, he would admit, with the X-ray to cause the hair to fall out, yet with proper precautions he thought it more probable that the X-ray would make the hair grow better. The tube should be kept moving from one part to another. The abandonment of the screen, the wide treatment of the patient, and the frequent moving of the tube were, in his opinion, important adjuncts in the X-ray treatment of cancer. It was well to remember that it often took a long time to cure cases of cancer by the X-ray. He had had a large and encouraging experience with lupus and rodent ulcer of the face, but the results would be reported later.

A little patient had come to him from St. John, New Brunswick, with a very bad acne of the face and extensive scarring. The diagnosis had been confirmed by Dr. G. H. Fox, and then he had begun the treatment with the idea of

burning as much as he dared. This treatment had been kept up for about six weeks. Finally the burn extended into the true skin, and the latter peeled of five times. The eyebrows did not fall out. After about four weeks of desquamation the face began to resume its normal color and the cure was absolutely perfect, the skin being soft like that of a babe. Although the result was so satisfactory he did not feel like assuming the responsibility of treating another case in this way. A case of carbuncle had taught him that in all inflammatory tissue about to break down into pus the application of the X-ray would cause a rapid breaking down. In this connection it was well to say that he had treated a case of chronic appendicitis successfully, but for the reason stated had hesitated a good deal about using this treatment in an acute case. A case of fibroid tumor that he was now treating had acted exactly in the way described by Dr. Gibson. Cases of scrofulosis could be very satisfactorily treated with the X-ray, the enlargement of the glands being reduced to a small kernel.

He had been asked to say something about the treatment of carcinoma situated deeply in the abdomen. The great trouble in these cases was that the tumor did not remain a local one for any length of time. His experience had been chiefly with cases upon which operations had been attempted, and then the X-ray called in as a last resort. From such cases it was not fair to draw any inferences as to the value of the X-ray in this class of cases. In many of the cases so operated upon it would be found that there had been an enormous distribution of cancer throughout the omentum and perhaps the liver, and it was because of this rapid and extensive cancer infection that it did not seem probable to him much good would result from the application of the X-ray. He had never yet seen any case of cancer that had not improved under the X-ray treatment; all had undergone more or less retrogression.

In conclusion, the speaker quoted Talleyrand's view of women—*i. e.*: "We can't get along with them and we can't get along without them," and added that just at the present time the X-ray could not get along well with the operating surgeons and could not get along well without them. Some of the more limited cases of cancer could be treated by the X-ray until only a small nucleus was left, and then it seemed wise to do a minor operation to complete the cure. This, he thought, would be the final settlement of this important subject. A very prominent surgeon of New York City, speaking of a case of cancer of the breast which had been referred to Dr. Morton for X-ray treatment, said, under date of August 21st, that he would regard it as a very important fact if the lymphatics had become normal to the touch under the treatment. This surgeon added that he was an absolute pessimist regarding the curability of such cases by surgical operation, and only operated, with that object in view, out of deference to current opinion.

In answer to questions, Dr. Morton said that he treated cases of epithelioma of the tongue by stretching the patient's neck back across the head-rest of a dentist's chair and applying the X-ray. He had treated nevus by applying the X-ray through an aperture in a lead screen.

LARYNGOLOGY AND OTOTOLOGY.

IN CHARGE OF

WILLIAM E. SAUER, M. D.

Ozone in Chronic Middle-Ear Deafness.—STOKER (*The Lancet*, November 1, 1902).—The effect of oxygen, or more particularly of its allotropic form, "ozone," in restoring a healthy condition to diseased nasal mucous membrane, led the author to experimenting with the latter in chronic progressive deafness or what is known as "chronic dry catarrh of the middle ear."

The ozone was generated by means of an electric current acting on a Ruhmkorff's coil to which the ozonizing tube was attached. The ozone so generated was pumped into the middle ear through an eustachian catheter for about three minutes, from twice to four times a week,

The histories of four cases are given. In all the hearing was considerably improved, and the tinnitus disappeared after a few treatments. In none were the applications made more than twelve times. The author believes that if the applications could have been made daily and continued for a longer time, the results would have been even better

Observations on Anesthesia of the Drum Membrane.—MCAULIFFE (*New England Med. Journal*, November, 1902) gives some facts on anesthetizing the drum membrane, and cites the conditions favorable to the application of cocaine, as follows:

(1) The removal of foreign substances and loose scales from the drum membrane and canal.

(2) Dehydration of the outer layers of the membrane—a desiccation which causes molecular contraction and interstices, through which the anesthetic can reach the deeper parts and nerve terminations.

(3) The induction of endosmosis.

He meets the first condition by using hydrozone, which is subsequently mopped out with cotton. "The second and third conditions are met by the use of alcohol and aniline oil" in equal parts, containing five to twenty per cent. of cocaine. Anesthesia results in from ten to fifteen minutes.

The disadvantage of the solution is that the aniline oil is toxic and obscures the field. The toxicity can in a great measure be prevented by not filling the canal with the solution, as is usually done, but by simply mopping it on the drum with a small wad of cotton. In this way the field is also less obscured. The author has also experimented desultorily for the last six years with tubal injections of cocaine to desensitize the drum membrane. He applies the anesthetic to the pharyngeal orifice, to the cartilaginous portion and to the deeper surface of the tube and drum cavity by means of a Weber-Liol catheter or a virgin silver modification; and comes to the conclusion that the eustachian tube is the only channel through which local anesthesia can be best obtained.

Temporary Modified Intubation of the Larynx as an Aid and Safeguard in Operations in the Mouth and Pharynx.—ROYCE (*Brooklyn Med. Journal*, October, 1902) suggests the use of a modified intubation of the larynx in order to obviate dangers and inconveniences attending operations upon the palate, mouth or pharynx. He recommends that a thin, tightly-fitting tube be wedged into the regular laryngeal tube, and having its upper end extended about three-eighths of an inch above the top of the intubation tube. A stiff rubber tube is forced over this end, and when intubation is completed this rubber tube has its free

end protruding from the mouth, all ready for anesthesia. As a consequence the operator is undisturbed by the anesthetist, and blood and refuse material are prevented from entering the respiratory tract.

The Influence of the Radical Mastoid Operation on the Hearing.—EDUARD BUHE (*Archiv fuer Ohrenheilkunde*, 56 Band, Heft 3 and 4).—The author found that out of one hundred and three cases operated upon in Schwartz's clinic, the hearing was improved in thirty-five, no change took place in thirty-seven, and in thirty-one of the cases the hearing was worse after operation. He states that the numerous reports of marked improvements in a large percentage of the cases are not borne out by facts. The following conclusions are noted by Buhe:

(1) Improvement or no change in the hearing takes place in those cases after the radical operation has been performed in which the labyrinth and labyrinth wall are intact, and the whispered voice is not heard at a distance of one meter.

(2) An improvement in the hearing is always noted when there is an interference of the sound waves in the external auditory canal before operation.

(3) Improvement or no change in the hearing is to be expected when the labyrinth or labyrinth wall, or both, are diseased and only a very slight trace of hearing is present before the operation.

(4) The hearing is made worse in nearly all cases in which the whispered voice is heard at a distance of one meter or over, even if the labyrinth is intact.

(5) The hearing is also made worse in those cases in which the labyrinth or labyrinth wall is diseased and the whispered voice is heard at a distance of more than 0.25 meter, but cannot be heard at one meter.

A Case of Nervous Palpitation of the Heart Cured by the Removal of a Spur from the Nasal Septum.—KASSEL (*Archiv fuer Laryngologie und Rhinologie*, 13 Band, Heft 2) reports the case of a man, aged twenty-five, who had been troubled for five months with attacks of palpitation of the heart. The slightest exertion on the part of the patient would bring on an attack; also on getting up in the morning; and at times these attacks came on when the patient was absolutely quiet.

Owing to obstructed nasal respiration an examination of the nose was made, and revealed a marked hypertrophied condition of both lower turbinates and a large spur on the right side of the septum. Touching this spur with a probe would bring on an attack of palpitation. The spur was removed, and since that time there has been no return of the trouble.

OPHTHALMOLOGY.

IN CHARGE OF

JOHN GREEN, JR., M. D.

The Genesis and Treatment of the Myopic Eye.—S. D. RISLEY (*Jour. A. M. A.*, November 22, 1902).—The view generally accepted in the early part of the nineteenth century, that the elongated myopic eye was the result of the *physiologic* growth of the hyperopic eye of early childhood, was later found to be untenable in view of the *pathologic* conditions observed—posterior staphylomata, choroidal atrophies, degenerate vitreous and detachment of the retina. Donder's teaching—that the myopic eye is a diseased eye—has been abundantly confirmed in the last half-century.

An improvement in the hygiene of schools, inaugurated as the result of Cohn's observation that the percentage of the disease rapidly increased during the educational process, did not lead to the anticipated reduction in the number of cases of myopia. Moreover, eyes which were found to be myopic at the first examination were found to have increased in degree at later examinations.

Green (1867) suggested that there existed a distinct causal relation between astigmatism and myopia, and Risley, in statistics gathered from Philadelphia schools (1878-1881), was the first to establish the truth of the suggestion. Later, he published a series of cases in which he had observed the transition from hyperopic to myopic astigmatism, without the refraction at any stage becoming emmetropic. The report of the school statistics (1881) brought out the following interesting facts: the emmetropic, and to a less extent the simple hyperopic eye, remained in nearly uniform percentage throughout school-life; enjoyed the highest acuity of vision, and was relatively free from pain and disease. Eyes with hyperopic astigmatism manifested symptoms of asthenopia, and exhibited changes in the fundus similar to those observed in highly myopic eyes. With the decrease in the percentage of eyes with hyperopic astigmatism went a concomitant increase in the percentage of myopic eyes, thus affording an adequate demonstration of the origin of the latter. The starting-point is this congenital anomaly—astigmatism—which, if carefully corrected, is shorn of its power of initiating the myopic process.

Treatment "should be begun before myopia is established." To this end, every child should be subjected to a visual examination at the beginning of school-life. If the disease is already established, Risley recommends the following routine treatment: Rest from near work, steady and persistent use of a mydriatic, protection from light by smoked glasses, internal administration of alteratives. Under this regimen there ensues marked improvement in the uveal tract, with relief of asthenopia. Then, and not before, the refraction should be estimated, both subjectively and objectively.

Faulty binocular balance is very frequent and should be corrected by prisms, or, in certain cases, by tenotomy or advancement. The writer has observed numerous cases where the asthenopia and choroidal disease were rebellious to treatment until the binocular balance was corrected. If the myopia is greater than 4 or 5 D., undercorrecting glasses are given for near work, and if the tendency to progression is marked, for constant wear indoors. In myopia of 12 D. or less the full correction is given for distance. If convergence is weak, the glasses are decentred outward (thus securing the effect of a prism with the base in). If esophoria is present at 6 m., a weaker glass than the actual measure of the myopia enables the patient to read at the remote point of the glass (*i. e.*, without strain upon the accommodation, thus relieving the tendency to undue

convergence). An undercorrection of from 3 to 5 D. is given in myopia of 15 D. or higher.

Under this method of treatment Risley has observed only three cases of retinal separation in patients under treatment. Macular atrophies are comparatively rare. Progression, after the first treatment, is exceptional.

Double Dacryoadenitis with Double Iritis.—MILLEE and VIDAUR (*Le Progres Medical*, October 25, 1902).—The patient was a male, aged forty-two, addicted to alcoholic excesses. Ten days prior to coming under observation he had some difficulty in opening his eyes and discovered a swelling at the upper outer portion of each orbit, near the orbital margin. There was no pain on pressure and no visual disturbance. A week later the right eye became red and painful, the pain running up into the temple, and vision was impaired.

Examination revealed almond-shaped swellings, immobile, situated at the upper outer portion of each orbital rim. In the right eye there was a typical iritis.

The patient was anemic and complained of general weakness. On the anterior surface of the lower third of the arm was a slightly scaly, reddish eruption, consisting of papules grouped in the form of arcs.

Syphilis was regarded as the etiologic factor and mercurial inunctions and potassium iodide exhibited. The patient passed from observation and twelve days later returned with a beginning iritis in the left eye. The right eye showed two elevations on the anterior surface of the iris near the pupillary border, vision being reduced to "fingers at one meter." There was no change in the appearance of the orbital swellings. A more vigorous antisyphilitic treatment resulted finally in the reduction of the tumefactions, the disappearance of the elevations on the surface of the iris and the cure of the scaly eruption on the arm.

The necessity of immediate and active antisyphilitic treatment is emphasized.

Thiosinamin.—G. F. SUKER (*Jour. A. M. A.*, August 9, 1902).—Thiosinamin has been investigated by Suker with reference to its use as a therapeutic agent in ophthalmology. Corneal opacities due to an infiltrate or exudate became much less dense, and vision notably improved. The drug, however, had no effect on the opacities due to true scar tissue. Prolonged application of a 10-15 per cent. ointment, together with the internal exhibition of the drug, relieved the tension of the cicatrized tarsus in some cases of entropion to such an extent as to render operation unnecessary. As an adjuvant to mercury and potassium iodide, it has been found of value in hastening the absorption of recent choroidal exudates. Some success has also attended its use in plastic iritis.

The drug is given internally in three-grain capsules once or twice a day, and locally in the form of a ten per cent. ointment, which is applied three times a day. The treatment may be prolonged indefinitely without danger. Results are sometimes only apparent after six months, but when once obtained are permanent.

BOOK REVIEWS.

THE PHYSICIANS' POCKET ACCOUNT BOOK. Consisting of a Manilla-Bound Book of 208 Pages and a Leather Case. By J. J. TAYLOR, M. D. Price, \$1.00 complete. Subsequent books to fill the case 40 cents each, or three for \$1.00. Published by The Medical Council, Twelfth and Walnut streets, Philadelphia.

This is an excellent example of the single-book system, each account being made in ledger form. It is especially commendable on account of the liberal size of page, allowing plenty of space for entering the various records.

THE PHYSICIANS' PROTECTIVE ACCOUNTANT. Consisting of Ledger, Visiting List, Section for Each Month of the Year, and Leather Case. Price complete, \$2.00. The Clinic Publishing Company, Ravenswood Station, Chicago.

This combination outfit consists of a visiting list made in 12 sections, with an excellent leather case and ledger. The arrangement provides for the entry of the name of each patient, description of service rendered and amount of charge in a manner which is strikingly simple but at the same time gives full legal protection. The accounts are transferred from the visiting list to ledger and cash receipts given in place in back of ledger. The system is simple and practical and should be more generally adopted by physicians who usually devote too little attention to the protection of their accounts.

THE MEDICAL NEWS VISITING LIST FOR 1903. Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60-patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber. Seal Grain Leather, \$1.25. Thumb-letter Index, 25 cents extra. Lea Brothers & Co., Publishers, Philadelphia and New York.

A visiting list is a valuable convenience for the active practitioner. Probably the best and most convenient of the many publications of this nature is the *Medical News Visiting List*. The *Medical News Visiting List* is issued in four styles, adapted to any system of records and any method of keeping professional accounts. It is printed on fine, tough paper, suitable for pen or pencil, and durably and handsomely bound in the size of a wallet for the pocket.

DISEASES OF THE RESPIRATORY ORGANS—ACUTE AND CHRONIC. Arranged in two parts. By WILLIAM F. WAUGH, A. M., M. D., Professor of Practice and Clinical Medicine, Illinois Medical College; editor *Alkaloidal Clinic*, etc. Volume of 222 pages. G. P. Englehard & Co., Chicago. Cloth, \$1.00.

The author's expressed object in preparing this volume was his belief that the treatment of acute affections of the respiratory organs deserve more special attention than is accorded by the text-books on practice. The volume is arranged in thirty-seven parts, each disease of the respiratory organs being considered in a separate chapter, the latter being systematically divided into (1) Definition of the Disease, (2) Etiology, (3) Symptoms, (4) Diagnosis, (5) Prognosis,

and (6) Treatment. The general arrangement of the book, the typography and general handling of the subject-matter reflects credit on the author and publisher.

MANUAL OF GYNECOLOGY. By HENRY T. BYFORD, M. D., Professor of Gynecology and Clinical Gynecology in the College of Physicians and Surgeons in Chicago; Professor of Gynecology in the Post-Graduate Medical School of Chicago and in the Chicago Clinical School, etc., etc. Third revised edition, containing 363 illustrations. Philadelphia: P. Blakiston's Son & Co. 1902. Price, \$3.00 net.

It has been the endeavor of the author of this book to supply the student with a manual of gynecology complete enough for study or reference in his college course, as well as a guide to him during his first years of practice. This volume will, however, be found also desirable for the busy general practitioner who does but a small amount of gynecological surgery. In this third edition the contents of the book have been recast and much new matter added. It is in its present shape a concise, but at the same time complete expose of the principles of modern gynecology, and one of the best manuals that has ever been presented to the student.

THE PHYSICIANS' VISITING LIST (LINDSAY & BLAKISTON). For 1903. Philadelphia: P. Blakiston's Son & Co. Price, \$1.00.

The visiting list has just appeared in its fifty-second edition, a fact which conclusively proves the superiority of this booklet. It certainly represents in its arrangement perfection of efficiency and convenience for the practitioner.

AMERICAN EDITION OF NOTHNAGEL'S PRACTICE OF DIPHTHERIA. By WILLIAM P. NORTHRUP, M. D. Measles, Scarlatina, German Measles, by THEODOR VON JURGENSEN, M. D. Edited with Additions by WILLIAM P. NORTHRUP, M. D. Authorized Translation from the German under the Editorial Supervision of ALFRED STENGEL, M. D. Price, \$5.00. W. B. Saunders & Co., Philadelphia and London. 1902.

This is the only volume in the "Nothnagel Series" containing an article by an American writer. The article on diphtheria in the original work is being translated and issued apart from the series by special arrangement. A careful perusal of both articles shows that the substitution has entailed no loss. It presents an exhaustive study of the disease in all its phases; its history, pathology, symptomatology and treatment are dealt with in detail. The various methods of treatment are carefully described and illustrated, especially intubation and tracheotomy.

The serum treatment is highly commended, and statistics are presented showing the great value of its prompt application.

The acute exanthemata, measles, scarlatina and German measles, are discussed by von Jurgensen. These subjects are dealt with exhaustively, especially with reference to their pathology and differential diagnosis. In the introduction acute exanthemata in general are discussed, following which is a detailed description of each.

DIE BEDEUTUNG DER NEURONLEHRE FÜR DIE ALLGEMEINE NERVEN-PHYSIOLOGIE. By PROFESSOR F. SCHENCK. Marburg, 1902. Würzburger Abhandlungen aus dem Gesamtgebiet der Praktischen Medicin. A. Stuber's Verlag, Würzburg.

This is a careful consideration of the neuron theory from the point of view of a physiologist, and especially from the standpoint of cell-function as opposed to cell-anatomy. Bethe and Apathy's work is discussed, and the effect of their discoveries upon our previous conception of nerve endings and nerve connections is treated with great insight. The main conclusions underlying the author's point of view are: First, that in most cases no physiological conclusion can be drawn merely from the anatomical structure of an organism; and second, that the cell plays no part at all in many physiological processes. This monograph can be earnestly recommended to those whose interest in neurology extends beyond the mere clinical aspect of the subject. A good bibliography adds to the value of the paper.

ESSENTIALS OF DISEASES OF THE EAR. By E. B. GLEASON, S. B., M. D.,—Clinical Professor of Otology, Medico-Chirurgical College, Philadelphia; Surgeon in Charge of the Nose, Throat and Ear Department of the Northern Dispensary, Philadelphia, etc. Third edition, thoroughly revised. 16mo. volume of 214 pages, with 114 illustrations. Philadelphia and London: W. B. Saunders & Co. 1902. Cloth, \$1.00, net.

This little compend contains as much information as many text-books on the same subject. The illustrations are numerous and fairly well executed. Nothing seems to have been left out to make it complete, and it fully meets the requirements of the students in their dispensary work. It is, indeed, a very commendable little work.

A TEXT-BOOK OF DISEASES OF THE EAR. For Students and Practitioners. By DR. ADAM POLITZER, Imperial-Royal Professor of Aural Therapeutics in the University of Vienna. Translated and edited by MILTON J. BALLIN, Ph. B., M. D., and CLARENCE L. HELLER, M. D. New (4th) edition, revised and enlarged. In one octavo volume of 896 pages with 346 original illustrations. Cloth, \$7.50, net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1902.

The medical world is too familiar with Professor Politzer's work to require words of recommendation. Ever since the appearance of the first edition it has been conceded to be the best work published on this special subject. The former editions were all revised in a careful manner, fully keeping pace with the epoch-making advances in otology. Two of the previous editions were translated into English. In the present revision so many changes and additions have been made that in order to form any idea of the advances noted by Professor Politzer during the past eight years, much time and careful study will be required. The chapters on aural surgery and intracranial complications are carefully discussed and deserve special mention. To the indications and limitations of the various surgical procedures much space is devoted; many practical illustrations are also given. The translators have added an appendix in which they give the prescriptions commonly used at Professor Politzer's clinic. The author's letter to the translators, in which he sounds their praises in most glowing terms, we hardly consider in keeping with the dignity that this work demands.

A TEXT-BOOK OF THE ART AND SCIENCE OF OBSTETRICS. By HENRY J. GARRIGUES, A. M., M. D., Consulting Obstetric Surgeon to the New York Maternity Hospital; Gynecologist to St. Mark's Hospital, etc., etc. With 504 illustrations. Philadelphia and London: J. B. Lippincott Company. 1902.

The author, whose "Diseases of Women" ranks among the best text-books of gynecology, gives us in this volume a new text-book on obstetrics. He is

careful to adapt it to the needs of the student. Cumbersome references to the literature, presentation of numberless theories of still unsettled problems and alike are omitted. The author presents his personal views—the word “I” is conspicuously prevalent. These views are interesting, they are sound and clear, because they are based upon a wide practical experience in the field of obstetrics.

The arrangement of the material is happy. He leads the reader gradually from the simple to the complicated, from the easy to the difficult. The volume is divided into a “normal” and an “abnormal” division. Each of these is subdivided into several parts, which in their turn consist of numerous chapters. A very strict adherence to this scheme of division furnishes a few strange peculiarities of the book. It leads to a few chapters, with special titles, which do not contain more than four lines of text (*e. g.*, Chapter XI, Respiration); it necessitates at times the unification of some very distantly related subjects. Thus Chapter “Hemorrhage” deals with placenta previa and hematoma of the vulva, Chapter “Rupture of Organs” with rupture of the uterus, laceration of vulva and perineum, and rupture of the spleen, heart, blood vessels or psoas muscle.

In some few instances the author's views cannot be accepted. He considers (page 102) the observation of uterine contractions an absolute proof of an existing pregnancy. We think that contractions have frequently been described in uterine myomata, of late even in ovarian cysts. On page 202 the normal alkalinity of the vaginal secretion is mentioned. The normal vaginal discharge of pregnant women has been found to be acid. In speaking of the use of cesarean section in the treatment of placenta previa the author seems to qualify the extirpation of the uterus in case of uncontrollable hemorrhage after the expulsion of the fetus as Porro's operation.

While using Peters' well-known illustration of the implantation of the ovum, the author strangely gives in the text not Peters', but the older theory of nidation.

The work is lavishly illustrated. Most of the pictures are taken from nature and are very instructive. We would, however, strongly plead for an omission of the two ugly plates illustrating breasts in pregnant and unimpregnated women, and for their replacement by more artistic products.

We trust that the next edition will eliminate a few errors in the alphabetical arrangement of the subjects in the index and will bring a more uniform orthography by avoiding the simultaneous use of the spelling “*hæmatoma*” and “*hemorrhagia*,” or “*fœtus*” and “*fetation*.”

It is needless to say that such trifling defects, almost unavoidable in first editions, cannot materially detract from the real merits of this book, which presents facts of practical significance in an exceedingly clear and instructive form.

A HAND-BOOK OF APPENDICITIS. By A. J. OCHSNER, M. D., Professor of Clinical Surgery, College of Physicians and Surgeons, Medical Department of the University of Illinois; Surgeon to the Augustana Hospital, etc. Pages 182. Illustrated. Bound in red cloth. Price, \$1.00, net. G. P. Engelhard & Co., Chicago. 1902.

In appearance the little work under discussion could hardly be excelled, with its uncut edge and gilt top. The work embodies the new well-known Ochsner ideas on this disease, but amplifies the subject matter as it appeared in the *Medical Standard*. The author's idea of placing the intestinal tract at rest in an acute attack by the use of gastric lavage and rectal feeding is recognized as a good one. His plan for opening and closing the abdomen where it is found that the McBurney incision does not afford enough room is known to the reviewer by experience to be extremely useful. These and much more are well treated in this little book.

A PICTORIAL SYSTEM OF INSTRUCTION IN X-RAY METHODS OF PHOTO-THERAPY, HOT-AIR, VIBRATION AND HIGH-FREQUENCY CURRENTS. By S. H. MORELL, M. D. E. R. Pelton, New York. Price, \$15.00.

It is not infrequent to observe the zeal of an enthusiast carrying its victim to an amusing extreme, and, in his search for means of relief outside of the physician's ordinary armamentarium, the author has been led into strange fields. His first detail is of the X-ray and its management, and this department is full of much good practical advice, but there is much that need not have been said. The author's ingenuity is shown in several devices he has arranged, and he has collected many references to the uses and results of X-ray, which, while not always reliable, make the book interesting. The illustrations of the Roentgen ray division are very admirable, and make a good study of most normal and abnormal conditions. The therapeutic side of this light is thoroughly dwelt upon, and some rather extravagant claims are made. More than half of the book is devoted to the X-ray and is, on the whole, very interesting and instructive.

Much space is given to the apparatus and uses of Photo-therapy, Hot-air Therapy, Vibration Therapy, and High-frequency Medical Electric Currents, and the book seems to have touched upon all new "adjuncts" to materia medica and surgery.

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